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SOME FORGOTTEN TONS OF FINE PARA.

THAT Brazil, notably Pará and Amazonas, is profoundly stirred over the great areas of cultivated *Hevea* that the tropical world possesses, is a mild way of stating a very patent fact. Yet it is probable that neither of the great rubber states mentioned, realize how strong is the position of the outside crude rubber interest. Nor do they perceive that Upriver fine is not the necessity that it was but a few short years ago. So great has been the progress in the art of preparing and learning to use rubber once deemed inferior, that most of the rubber manufacturers could, if they would, produce high-grade goods without using a pound of Brazilian-grown rubber. In other words, with other grades in the market, while they might prefer Pará, they can get along without it. Plantation rubber, shrub rubber, such as guayule, extracted rubber, pseudo rubbers, are real Pará substitutes in hundreds of rubber mills, and manufactured rubber goods grade as high as ever they did. There is, however, another source of supply that crude rubber men are likely to overlook, yet one that will wonderfully help in case of a short crop or too high a range of prices on the Amazon. The world, not the tropical world, but the temperate zone, possesses several million pounds of Pará rubber that will be shortly offered to the trade at from 50 to 70 cents a pound. There will be a steady offering of it for years to come and the supply will increase. Its source is the worn-out motor tire that goes to the reclaimer and is thoroughly "recovered." For five years past the tire manufacturers have been turning out tons of tires and paying a high price for raw material. This great accumulation of rubber is just beginning to come back, and is of a grade that can be used in almost any line of work. Those who valorize must reckon with this great invisible supply as well as with the visible.

RUBBER MANUFACTURERS AS PLANTERS.

THE news that one of the great rubber companies is to plant *Hevea* on a very large scale is of special interest not alone to its stockholders, but to the trade at large. The wisdom of such a move is unquestioned. The experimental stages of *Hevea* planting have passed. It

can be told almost to a certainty just what product can be secured in a very few years if reasonable care in location and in management are exercised. The chief value to the company will not be the profits of such a plantation, however great they may be. It will be the assurance of a constant supply of rubber at a low, unvarying cost. The vulnerability of any large rubber company may easily be measured by the amount of rubber it uses. The greater the output of manufactured goods, the greater sufferers they may be from corners, and crop shortages. Once such a plantation is producing on a scale commensurate with the needs of the company, there will result a greater steadiness in the market, and an increased difficulty in manipulating it. The earlier their rubber trees begin to yield the better it will be for the rubber trade of the world.

It has been very generally felt by rubber manufacturers that it was not within their province to plant rubber. Indeed, it is only within the last half dozen years that they were willing to concede that rubber could be cultivated upon a large scale, and successfully compete with the wild product. That a change of sentiment is at hand is already evident. Russian, German, English and American rubber manufacturers already are very considerable owners in *Hevea* plantations, and the number is constantly increasing.

That the ultra conservative should deprecate such a departure from the traditions of the trade is perhaps natural, and yet they read of great steel companies and little ones, too, buying iron prospects and locating and mining their own ore. Or, what is a better parallel, they know that the great chocolate factories of Europe and America get their cacao supplies from their own tropical plantations. The fact that a company is making steel billets does not seem to militate against its success as an ore producer. The officials of the chocolate company are able to select land, plant it and get just as good crops of cacao as if they were planters, and planters only. Why then should not the rubber manufacturer secure land and install a plantation "unit" as well administered as any other in his organization?

MORE "REAL RUBBER" IN TIRES.

THE Automobile Club of America, the richest, largest and the most enterprising of all automobile clubs, runs an up-to-date supply department for its members. Here one may buy any automobile accessory and notably—tires. Not all tires, but such makes as the club believes it safe to market. This is usual with many clubs. What is somewhat unusual is the selling of a new tire, made especially and exclusively for the club and available to its members only. According to common report, this tire is not to be made by any of the great successful tire manufacturers. If gossips tell the truth, it will be produced by a small company, not very well known, and one that is yet to prove that it can, no matter what its backing, create a tire that is better than today's best. No doubt the Executive Committee of the Automobile Club believe exactly what they are stating to club members—that "these tires will be superior in every respect to the best tires turned out today by any manufacturer; of extraordinary durability and resiliency, and of exceedingly high grade and degree of excellence, with more real rubber in their composition than any tires now on the market." Granting their absolute honesty, their unquestioned interest in everything that is best for the club, that one sentence proclaims to any rubber manufacturer a lack of knowledge of the subject they treat. They promise, for example, "more rubber" in their tire than is to be found in any other tire of equal size. That is, they take it for granted that more rubber in a tire compound will make the tire better. That undoubtedly is true of low-grade tires, but is absolutely not true of the best grades. We don't expect to be believed by any except those who understand rubber compounding when we say that the addition of 10 per cent. or 15 per cent. of rubber to the best tire compound in existence today would probably shorten the life of that tire 25 per cent. or more. In all friendliness and with the greatest respect for the Executive Committee of the Automobile Club, we counsel caution.

THE "MONSTROUS MYSTERY."

IT IS perhaps a bit late, as it happened some months ago, but the expressions have not been withdrawn, and as they soak in they seem more offensive. They are credited to the very able and usually well balanced president of the National Fire Protection Association, who is quoted as follows: "In fire hose, the arteries and veins of our fire departments, we find manufacturers making a monstrous mystery of their wares."

To begin with, a man possessed of the oratorical temperament should not be held too strictly to account for his utterances before an applauding crowd. Oratorical intoxication is a possibility, and should be forgiven. "Monstrous mystery" is a beautiful alliterative

phrase, a bit of word painting, that needs no fact to make it interesting. Poets and orators, if they live up to their opportunities, all deal in that sort of lurid phraseology. Like Bryan's "Cross of Gold," it hits the popular fancy, and it does no harm. It is not worth while denying either the mystery or its bombastic adjective, for fire hose departments of practically every rubber factory in the world are open to the orator or to anyone else who has excuse for visiting them.

Monstrous Mystery? Mellifluent mush!

WHY CRY CALAMITY?

BASED on recent political changes at Washington, on the altogether improbable contingency of possible complications with some foreign power, on the trusts "bogey," on the backward spring season, which, by the way, promises to result in exceptionally good crops, the alleged prospect of labor troubles or some other, equally remote, and in most instances wholly visionary cause, we note a tendency in some quarters to predict impending commercial and industrial calamity, financial cataclysms, and all sorts of terrors, of the kind that disjoint the times generally.

That these hysterical utterances are wholly gratuitous and their ostensible causes without the least foundation or reason, will be evident after a calm review of conditions prevailing throughout the country, which prove, not only that pessimism is unwarranted, but that there are ample grounds for anticipating widespread prosperity. The basic wealth of the country comes from the productions of the soil. The former creates wealth; the railroad, manufacturer and merchant only develop and handle it. Unless the producer prospers the other lines must also suffer. Prosperity for the producer means well-being all along the line, means that railroads will haul heavy trains, workmen in factories will be fully employed, merchants will have customers, and all collateral branches of business will receive patronage in proportion. The first thing to estimate, therefore, is the promise to the producer.

From every present report the prospect was never brighter. The acreage for almost every crop has been largely increased for the coming season, and every report of present crop condition is highly satisfactory. The president of the largest bank in America, returning a few weeks ago from an 11,000-mile trip throughout the farming country of the south and west, expressed the opinion that the return to the American farmer in 1911 would be approximately eight billion dollars. And such a return will represent far greater profits than ever before. Scientific farming in the west, as taught by the Department of Agriculture, has increased the yield of wheat from 13 bushels to 20 bushels to the acre, has added 30 per cent. to the yield of corn, has introduced diversification of crops, has created orchards and small-fruit gardens, and with these increases has reduced the cost of production. Demonstration farms in the south have shown that land which grew 400 pounds of cotton to the acre can be made to produce 1,500 pounds. Other crops have been increased in like proportion, and the producer's return, in dollars, is far greater than ever before in the history of the country.

If all this development means anything to the country, it means that the buying power of the public will be vastly increased, that the market for manufactured articles, whether they be of iron, textile, or rubber, will be tremendously developed. It means that more tires, more mechanical rubber goods, more footwear will be bought as surplus pocket money becomes more plentiful. Factories will be busier, merchants will prosper, and the people will buy. It means that the calamity howler will be relegated to a seat way back in the rear.

THE HIGH PRICE OF RUBBER during the year 1910 has had a stimulative effect that should not be overlooked, on the activity of those inventors who devote their attention to the production of synthetic rubber, rubber substitutes, and the perfection of the various processes for the reclamation or other means of using old rubber. Even the soya bean, a staple article of food supply in the far east, and the residue of which, after extraction of the oil, in the form of beancake, is, with the bean itself, imported into Europe, for use as cattle feed, has been laid under contribution by the indefatigable searchers for a raw material for artificial rubber, a German patent having been issued for the manufacture of artificial rubber from soya bean oil.

Reference has been made on various occasions in the columns of THE INDIA RUBBER WORLD, to the extraordinary durability displayed by rubber tires, as compared with steel tires doing the same work under similar conditions, the result being invariably favorable to the rubber tire. A case recently brought to our attention merits particular notice. A Diamond tire was removed from an automobile in Spokane, Wash., after having been in use since 1908, with a mileage of 30,000 miles to its credit.

NEW USES FOR RUBBER.

NOTWITHSTANDING the high price of crude rubber, until recently prevalent of which we have heard so many complaints, new uses are constantly being devised for this substance, which must result in increasing, to some extent, its consumption. Some of the more recent of these new uses, which have come to our attention, are sufficiently unique to be interesting and afford an insight into the diversified utility of this remarkable material.

One of the most remarkable and, at the same time, one of the most beneficent uses suggested for rubber, is for the construction of artificial or supplementary muscles for children suffering or threatened with infantile paralysis. By the local application of strips of elastic rubber over the weakened muscles, in a manner devised and described by Dr. Roland O. Meisenbach, Buffalo, N. Y., the tensile strength the muscle lacks is supplied, a local stimulus effected and contractions prevented, while the application being painless and not inconvenient and the effect being continuous and independent of the patient's volition, the remedy is especially applicable for children.

Carpet sweepers are equipped by a manufacturer with corner buffers, by means of which the furniture is protected from injury and they can be applied to either new or old sweepers. Another manufacturer employs rubber in the manufacture of a pad that protects table tops from defacement by hot dishes.

In the future development of the flying machine, rubber seems destined to prove an important factor. Rubberized fabric for planes has been given the preference by the most successful practical aviators, while the extent to which a safe and successful landing depends on the quality of the rubber tires with which the "plane" is equipped, has induced leading tires manufacturers to bestow particular attention on the production of "aereplane tires."

In the form of hose, rubber comes into use in an ingenious machine, employed by paviors in Germany, for ramming or tamping paving blocks into place. The pneumatic ramming tool is connected by rubber hose with a portable air compressing plant, and the compressed air, acting on its mechanism, causes it to deliver a rapid series of hard blows on the paving stones that are being set.

Another use to which rubber hose is put is in the operation of an ingenious vacuum cleaner, for which a stream of water from an ordinary faucet furnishes the power. Passing down one arm of a Y branch, it creates, by suction, a partial vacuum in the other arm, and this in turn is connected with the cleaning tool. The dust laden air, drawn up the tube, encounters the water at the junction of the Y and the dirt is washed down the drain. Rubber tips for furniture; rubber toe-caps for shoes, rubber heels, rubber tiling for floors, rubber trays and dishes are made for photographers, while rubberized cotton fabric for balloons is much less expensive, lighter and more impenetrable than the water-proofed silk heretofore used. In addition to its extensive employment in tires, rubber has found very many uses in connection with the automobile; mats for the floors, pads for the pedals, hand grips for the levers, all are made of rubber, and to some extent it enters into shock absorbers and similar devices, to say nothing of the tubing for gas lamps, electrical insulation, hose connections for radiators, etc. It would be possible to enumerate a thousand and one purposes for which rubber in various forms is employed, that have been added, within the past few years, to its uses. It is a question whether, with all the additions that have been made to the output within the past few years, in the shape of plantation production, reclaimed rubber, etc., the "new uses" have not more than made up for the increase in production, so that, as far as the volume at the disposal of the consumers is concerned, there is but little improvement to be recorded.

PROTECTION OF THE PRODUCTS OF AMAZONIA.

(Translation from *A Proviancia do Pará*, April 7, 1911.)

THE *Proviancia do Pará* has dealt in detail with the matter of the rubber business, from the standpoint of protecting same against speculators who are doing their best to bear the market.

Not long ago we had an opportunity to give the details of the purpose of Congressman Dr. Justiniano Serpa's trip to Manáos, on behalf of Dr. João Coelho, Governor of the State of Pará, Dr. Serpa transmitting to the Governor of the State of Amazonas Dr. Coelho's intention of protecting the rubber business through the establishment of a banking institution.

This protection has afterwards been extended to all the natural products of the two States, keeping in the foreground, as the most important, rubber. Dr. Serpa transmitted yesterday to Dr. Coelho the results of his trip, as follows:

The basic ideas of Dr. Coelho were, with some modifications regarding the market of Manáos, entirely accepted by Colonel Antonio Bittencourt, Governor of the State of Amazonas. These ideas having thus been accepted, Dr. Coelho, as Colonel Bittencourt had done, decided to transmit to the market of Pará the resolutions arrived at, and, therefore, invited the Commercial Association to attend a meeting, which will be held today at 8, in the Governor's Palace.

The plan for protecting the products of the Amazonia consists chiefly in the establishment of two banking institutions, at Pará, and at Manáos, each with a capital of three million sterling, with separate boards of managers, but identical by-laws.

These banks will have a department of mortgages on country lands, to help farmers, also a department of discounts, for which purpose one-third of the capital will be set aside.

The governments of the two States will guarantee the interest of 6 per cent. (gold) on the capital.

In the plan there is also the idea of trying to get the backing of the Federal Government for a loan of six millions sterling intended for the standardization of the prices of rubber.

For interest and refunding on this loan the two States will, together, impose a duty of 400 Rs. per kilo of rubber exported, and will try to get the States of Matto Grosso and Goyaz to concur in the same duty, in order to standardize the selling conditions of the production of the four States.

Furthermore, the two States will issue laws to protect the planting of *hevea* and decrease the cost of production, also to ensure one quality only being exported—the highest grade—thus eliminating the intermediate and low types.

In due time the Assemblies of the two States will meet to discuss and approve these laws, also efforts will be made to obtain from the Federal Government laws conducive to the protection of the products of the Amazonia.

This is an outline of the plans submitted today by the Governor of the State to the market of Pará.

IN THE LITIGATION so long in progress, regarding the right to the use of the process of manufacturing and mounting solid rubber tires, on which United States Patent No. 554,675 was issued to Arthur W. Grant in 1896, the Supreme Court of the United States rendered an important decision on April 11. The court affirmed the decree of the lower court in the case of the Diamond Rubber Co. vs. the Consolidated Rubber Tire Co. and the Rubber Tire Wheel Co. and declares the Consolidated Rubber Tire Co. to be the exclusive owner of the Grant process rubber tire. The court holds that the fact that the defendant company uses the Grant tire and not the tire covered by the Willoughby patent, disposes of its contention that the Willoughby patent covered the purpose that the Grant patent sought to attain and that in using the Grant tire the company recognizes its superiority. The Diamond Rubber Co. is enjoined from manufacturing the product.

India-Rubber in Dutch Guiana.

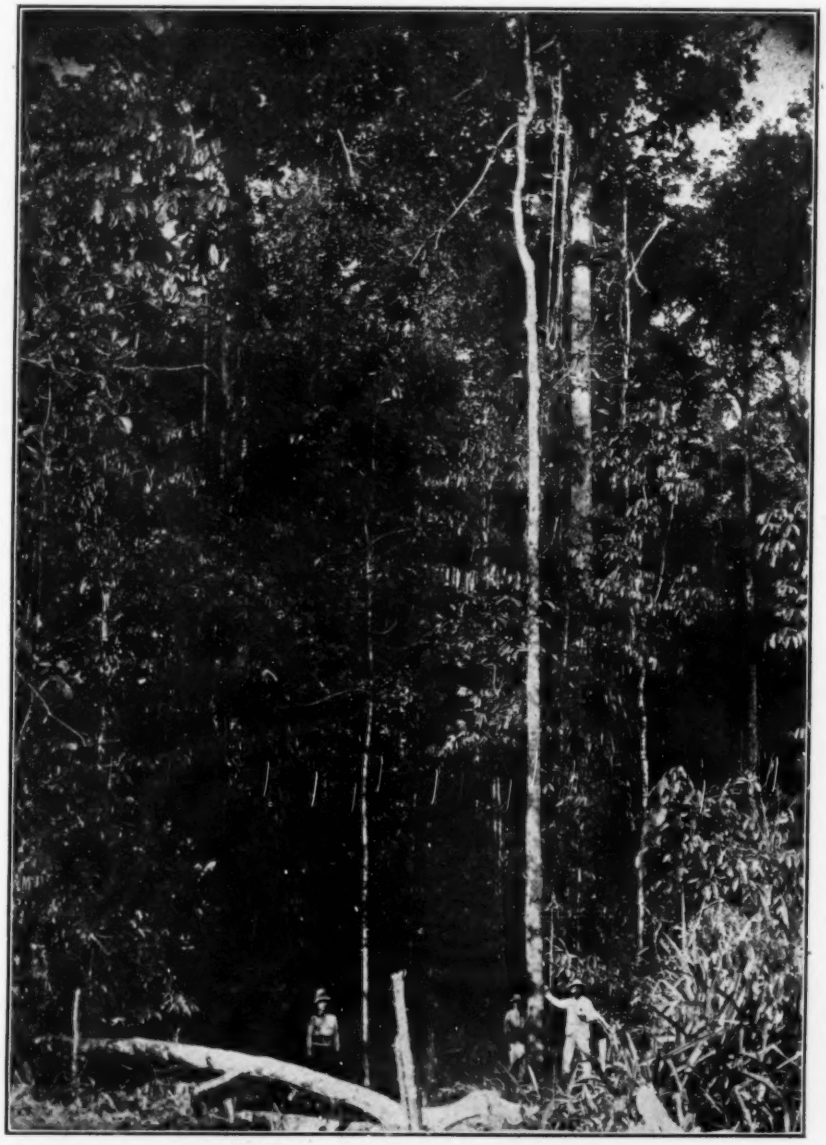
By the Editor of "The India Rubber World."

FIFTH LETTER.

A Ride on the "Kolonial Spoorwagen."—The Wanica Canal and Lelydorp.—The Great Sand Savannah.—Balata Trees.—Through the Gold Fields.—Real Rapid Transit.—Convicts and Calabashes.—Off to Barbados.

NO matter how perfect a system of waterways a country may possess, one is apt to miss many interesting topographical features unless journeys are taken overland. I was, therefore, exceedingly pleased when I learned that the Balata Man and the superintendent of the *Kolonial Spoorwagon* had arranged an all-day journey by rail into the interior for us.

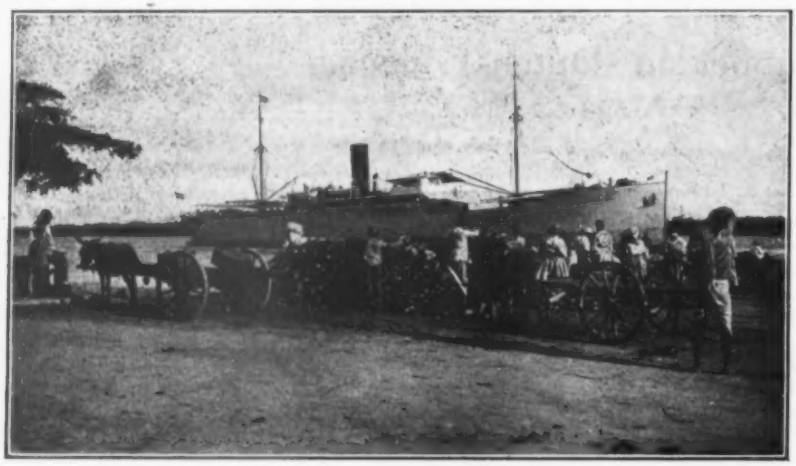
The railroad is a new feature in Dutch Guiana, being only four years old, and it enjoys a necessary government subsidy. In spite of the fact that five hours by rail means five days by water, boat rates are cheaper than transportation by rail and the waterways do the bulk of the business. The course of the railroad is midway between the Saramacca and Suriname rivers, following for much of the way a sandy reef that extends from the hill country nearly down to Paramaribo. This reef in two or three places stretches out into broad sandy savannahs, but for most part is bordered by rich clayey loams that under cultivation are wonderfully productive. The road was specifically to give easy access to the gold fields, but once the country is developed its possibilities in agricultural and other freights will be considerable.



WILD *HEVEA GUYANENSIS* IN THE GOLD FIELDS.

We rose at 5 in the morning to prepare for our journey, and after early coffee we made our way to the railroad station (*vaillantsplein*), which was quite near the hotel. We were early, partly because we were doubtful of the correctness of the hotel clock, at least as far as its agreement with the railroad time went. Many others were early also, and the long station platform was crowded with negro men and women, and coolies, with here and there a white man. The negroes were full of excitement over the prospect of a ride in the train, and were jostling, laughing and joking, and constantly getting in everybody's way. As this train (*trein* 5) runs only once a week, it is still a novelty to the community and most of the dark population assemble to see it start and to cheer it on its way. Back in the interior the Indians walk scores of miles to the railroad track, wait patiently until the train passes, then go back to their distant homes, fully satisfied with the result of their journey.

The train was "mixed," made up of flat cars, several third class coaches and one mail and parcels carriage and first class coach. The one locomotive was of the typical German type and the coaches similar to those used in Europe, except that above the windows were broad wooden awnings as a protection against the mid-day sun and the heavy rains. One half of a first class car was reserved for our party of four, or rather five, for the young Dutch negress who was to act as caterer for the party certainly counted as one, and her arrival, accompanied by coolies laden with fruits, tea-making paraphernalia, water cooler, etc., was viewed by us all with great content. She had an open compartment all to herself, and in



THE BANANA BOAT OFF NIEUW AMSTERDAM.

spite of the fact that this was her first railroad journey, she did not forget to buy the best bananas at the lowest market price, the ripest *grenadillas*, or to supply all of our needs, deftly, quietly and with the most respectful, dignified courtesy.

After much good-natured confusion, the third-class coaches were filled with their freight of animated ebony, the superintendent wished us *bon voyage* and gave the signal to start, and incidentally it was on schedule time to the second. To the accompaniment of the clanging bell that gave out a peculiarly solid tone, and the shrill warning of the whistle that blew at every street, bridge and curve, with minor salutes between, the train pulled out of the station, ran down the main street through the whole length of the town and out into the open country. The streets were lined with sightseers and every window was a frame for dusky faces, the train being the object of their interested regard.

The roadbed was excellent and was balasted with white sand taken from the great deposits in the interior. The day was cloudy and the white ribbon of road did not try the eyes in the least bit, but when the sun shines, engineers, conductors and many passengers wear colored glasses to guard against the fiercely reflected rays from this white roadway. We were so comfortable in this slowly moving train with its speed of 20 miles an hour that it did not seem possible that we were within five degrees of the equator, but those who built the railroad appreciated it. At the great sand savanah which covers some thousands of acres, the heat was so intense that day work was abandoned and all of the grading and track laying was done by the coolies, who worked through the cool damp of the tropical night and slept through the day.

Shortly after leaving the city we passed the site of the projected Dutch Settlement Colony, a pet plan of the government, the idea being to offer homes to a large number of Dutch colonists. It does not find favor among the residents of the colony, as they claim that the descendants of Europeans if born and bred in the tropics, do not show the stamina or enterprise of their parents.

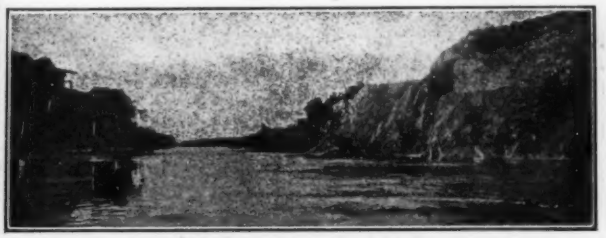
We passed several cattle ranches, but this is not a particularly good cattle country, as the native tigergrass affords little nutriment. The course of the road was marked by innumerable flag stations, consisting of a few native huts, a diminutive store and a church. The huts were quite picturesque and even when thatched with palms had a suggestion of Dutch architecture. In them the coolies or negroes lived, with a cow and numerous chickens, in perfect content.

A little way out of the city we crossed the great Wanica canal, which connects the Suriname and the Saramacca rivers. The first station for stopping was Lelydorp. Here we passed the down train and paused while crowds of coolies and Dutch negroes crowded about with baskets of fruit at ridiculously low prices. The negroes in the rear cars bought cocoanuts and bananas as long as their money lasted, the transaction accompanied by much gesticulation and many wordy battles. After a long interval our train slowly pulled out and the journey was continued. Although the country was nearly flat it was not uninteresting, for we passed through heavy forests, the large trees bound together by bushrope and decorated with orchids and epyphites. On either side of the single track the constantly encroaching bush was cut back, and often drains from eight to ten feet deep were dug in the clayey soil to carry off the water that in the rainy season would otherwise leave no vestige of track or road. We crossed many little streams, some running bright and clear, others as black as ink. The flowers along the way, although not appearing in great profusion, were gorgeous. Notable among them was the scarlet "parrot's tongue," which the coolies say betokens rich soil.

We crossed a branch of the Para river at Republick, a neat

WHERE THE STEAM CARS LEAVE PARAMARIBO.

Village on the Para River.



A View of the Upper Suriname.

little community that was once a garrison town where fifty Dutch soldiers held a great force of negroes and Indians in check. Here we took on wood and water for our engine. Then on, by little cassava fields, banana and cocoanut plantations, to Kwakoegro, where we had a "twenty-minute" stop which lasted an hour. During this wait we walked over to the Saramacca river to see the great hardwood pier where much river freight is handled. Here railroad and waterway come into open competition and the latter always wins. Passengers and freight from the gold fields come down the railroad to this point because they have no other means of transportation. Then they transfer to take a five day boat trip to Paramaribo rather than a five hour train journey, because it is cheaper. Not that the railroad rates are exorbitant or prohibitive, but that the water rates are phenomenally low. Besides, any negro gold digger who did in five hours what could be done in five days would be outraging every procrastinating instinct that makes him what he is, or rather what he is not. If the river boats were really alive to the desire of their patrons they would arrange that the trip take twenty days instead of five.

A great many things along the way puzzled us more or less, but we figured them out the best we could without asking too many questions. We wondered, to be sure, why a man should label his hen coop *"Te Koop,"* as it was easy to see what it was. It was only when we saw a fine Dutch bungalow thus labeled that we asked questions, and learned that *"Te Koop"* meant "For Sale" and not "The Coop."

It was along near here somewhere that there were great cotton plantations some fifty years ago. They were abandoned, however, as the planters found more profitable use for their labor in sugar and coffee. The reason for the long wait at this station became apparent when a white-clad figure appeared far down the track, and on nearer approach turned out to be an engineer whose duty it was to patrol the track in a handcar run by gasoline. His motor had failed, and with visions of train wrecks and dire disaster to spur him on, he had run a mile through the blazing sun to save us. As we often reached the frightful speed of 20 miles an hour and averaged more than 10, and, moreover, it was broad daylight and the track was a straightaway, the peril was imminent and his Carnegie medal will doubtless reach him in due time—by river boat.

This railroad, although running through the bush (and to those who are not familiar with the term "bush" I will explain that it means jungle or forest often of the heaviest growth), has many of the accompaniments of the better class of tropical railroads the world over. The grades were easy, the roadbed nearly perfect, the stations clean and orderly, the officials courteous, and there were no offensive loungers. Oftentimes the station platforms were crowded with passengers and their families, even down to the third and fourth generation, but they were either there on business, as respectful sightseers, or as an enthusiastic backer of a friend or relative who had secured money enough to pay for a twenty-mile ride and courage enough to walk back.

We dropped two cars at Kwakoegro. A little beyond the station we began to run into hilly country and passed through occasional cuts that showed the red and yellow clays, some beds of kaolin and ledges of sandstone. Balata trees began to be in evidence, and after they were once noted were very easy to recognize, as they present a different appearance from almost any of the hard woods of which these forests are composed. The trees grow to a great height, oftentimes with 60 feet of straight trunk before the branches appear. The bark is a gray-black in color, rough in texture and at a distance looks not unlike the American ash. The leaf is very much like the *Ficus elastica,* while the tree crown with its many spreading branches has much the appearance of the white oak. Many of the trees, or more accurately, some of the trees, had been tapped, but very many of them had not been touched. We saw very few birds or animals of any kind—a few hawks, macaws and parrots, one small alligator and big bushspider were all—and soon we came to Guyana placer. Here most of the passengers left us, as they were bound for the gold fields, which lay but a short distance away. They were greeted by a crowd of miners, white and black, who had come down to meet the train and to collect supplies, letters, and whatever was brought up to them from the outside world. Further on we ran close to some of the placers, one in particular where a huge dredge was being set up, an attempt to get the gold out with a bit of American hustle, instead of the slow panning by hand, generally indulged in.

I ought to say that our train was now a special, consisting of one car and the engine, a courtesy that the superintendent of the road paid our party that we might penetrate into the interior as far as the rail went. So we went on, past deserted balata camps (the tree was fruiting and the latex does not run then, so the gatherers say), through railroad camps that a year ago were humming with life, but now abandoned, stopping at various placer stations, and we finally reached the terminus of the road in a pouring shower. We had planned to go out into the bush here and see the gold mining at close range, but it was too wet, so we lunched comfortably on board and started back.

The Special Train.

An Avenue of Cocoanut Palms.

Dutch Negro Homes, Outskirts of Paramaribo.

On the return journey our car, placed at the rear of the train, having a broad covered rear platform, made an ideal observation car. There were two flat cars in front of us, and from time to time we picked up hand cars and their crews. It was very interesting to see a crew of these negroes pick up a hand car and, holding it chest high, discuss for five or six minutes the best place to put it, and any other points that occurred to them as important at that moment of relaxation!

We got a surprise at Kwakoegro when the train stopped outside of the station and a police official invited us to accompany him to the searching rooms. It seems there is a government tax of about ¼ of 1 per cent. assessed upon gold, and people coming from the gold fields are searched. I do not know what they did to the others, but the searcher simply patted my breast pockets, grinned with great amiability, and said, "A' right," and bowed me out. In the case of the natives, however, the search is very rigid and needs to be, for the negroes conceal gold wherever they can, their kinky hair being a favorite hiding place. The negro women often dress their hair with a gummy substance that makes it very nearly impenetrable. When this happens the searchers know that there is gold inside and they patiently work away at the kinky head and wash the gold out.

Night fell, but with a clear track and no more stops we rushed along the white road, sometimes going 35 miles an hour! As we entered town with clanking bell and whistle going every minute, we found the streets crowded even more than they were in the morning. A train never before had arrived there at night, and the engine with its headlights and cars brightly illuminated was a fascinating novelty and we were greeted by cheers. As we drew into the station the superintendent met us and asked how we enjoyed the journey, and although it was our special that made the train late, he apologized for not bringing us in on schedule time.

It had not occurred to me that in Dutch Guiana we were close to the penal settlement in French Guiana, and that Devils Island was but a short distance away. A suggestion of this nearness came about in this manner.

I had seen some beautifully carved and ornamented *calabashes* and sent word to the artist, a Frenchman, that I wanted some. In due time he appeared with a great variety of carved *calabashes*, a model of the guillotine, and various knicknacks, such as convicts all over the world are forever making and selling. Then I knew that he was a fugitive from the penal settlement in French Guiana. It seems that some prisoners do escape and make their way with incredible suffering through the bush to throw themselves on the mercy of the Dutch. To the lasting credit of the inhabitants of Suriname be it said that these fleeing prisoners are rarely returned unless they prove themselves hopelessly criminal. Indeed they are given employment and medical attendance if required and a fresh start in life. Nor do the French officials protest, possibly because the escape is rarely reported, and, so it is gossiped, the prison officials still charge the home government the pittance that is supposed to represent the prisoner's board and lodg-

Placer Mining, Suriname Gold Fields.

ing. Not all of those who escape survive, however. The jungle road is said to be strewn with the bones of those who, though strong enough to make the effort, were too weak to persevere, and who lay down and died, their faces turned toward freedom.

At length, much too soon, the day of departure from hospitable, fascinating Suriname arrived. After giving mod-

GOLD MINERS CAMP "DIEU MERCI."

erate tips to the surprised and grateful servants at the little hotel, and being thanked with deep and respectful curtsies and with wishes for a safe journey and a prompt return, we drove to the house of the Balata Man, who insisted in taking us out to the steamer in his own launch. Although it was "mail day" and he was patently busy, he tarried for lunch aboard the steamer and then departed before we had half told him and his charming wife how pleasant and profitable they had made our stay. Soon after this the great banana barges drew away, the anchor came up and, slowly turned by the outgoing tide, our boat's head was pointed north and the homeward journey begun.

[THE END.]

INDIA RUBBER AND BALATA IN DUTCH GUIANA.

(By Our Regular Correspondent.)

THE imports of *Hevea-Brasiliensis* rubber seeds in 1910, for the greater part from Ceylon by private planters and the aid of the botanical station, amounted to far over "a million seeds." The germination, though guaranteed to be over 70 per cent., was, as a rule, not entirely satisfactory, and I fear to overstep the limit of the safe side when I put the figure at 35 per cent.

From now, however, Surinam is able to supply *hevea* seeds from her own trees and even sell seeds and stumps to Demerara. A local planter made a contract to sell quite a number to our English neighbors.

Voorburg, Clevia, de Neuwe Grond and Clarenbeek were among the first to send small consignments of plantation rubber to Europe and the United States. The reports on it were favorable. The first four cases of our wild rubber—*Hevea Guianensis*—went to your side.

Our Forest Department is trying to develop this industry in our "Boven Para District." The negroes there still laugh at it, but some Japanese and Frenchmen were already able to tap and prepare the wild rubber at 60 (American) cents a pound, and make two pounds per working day and are happy and stick to it.

The Surinam balata industry has had a record year, as may be gathered from the fact that the imports have increased from 365.2 pounds in 1881, when the trade had its commencement, to 893 tons in 1910, compared with the next largest year's shipments, 630 tons in 1909.

The January, 1911, issue of THE INDIA RURRER WORLD had a very interesting article, by the editor, on his visit in Dutch Guiana to the "balata man" in Paramaribo, and he will not be surprised to learn now that the balata business of Maj. J. G. van Hemert and Henri Benjamins, LL. D., has been taken over by the "Balata Compagnie, Suriname," Ltd. The capital of this company is 2,000,000 florins ($800,000). Directors are leading rubber men in Antwerp and Rotterdam. The representative in Paramaribo will be Mr. Henri Benjamins. We learn, from the prospectus, that the new company has taken over the whole interest of the gentlemen named, and their concessions and exploitation for 1,050,000 florins in fully paid up shares.

Subscriptions have been invited for 1,300 shares in 1,000 florins, of which 500 shares were already placed. The balata exports of the firms mentioned, have grown from 144 tons in 1905 to 365 tons in 1909, or a little over half the total exports.

According to the books of the firm the net revenue of their business has been:

In 1905	fl. 97,295
1906	101,680
1907	145,279
1908	121,128
1909	183,552
The minimum guarantee for 1910 is	180,000

The crop for 1911 is already sold for a higher price than that of 1909. Above stated net revenue was earned after making the necessary deductions. The exploitation of balata is accompanied by the making of advances to the "bleeders" or tappers, which advance must be regarded up to a certain amount as "funds sunken." During the exploitation there has been written off and figured in the balance as pro memoriam a sum of 336,678 florins, of which amount, perhaps, one-third, or 120,000 florins, will still be receivable. The items to be taken over, according to the balance of December 31, 1909, are:

a. Advances for the campaign, 1910	fl. 344,410.08½
b. Goods in different depots, food and clothes for the laborers	62,043.04½
c. Stationary properties, wharf Loekibaka at Paramaribo, river frontage of 125 yards, with stellings, storehouse building, wood, and stores in Nickrie Tibiti and Saramacca river	95,207.11
d. Steamboats "Ellen" and "Helena," with canoes, paddles, etc., etc	18,940.10
e. Carts in Surinam, debentures, etc	15,139.64
f. Balata already in Europe	13,149.18
g. Advances in earlier campaigns, 336.675	pro memoriam
	fl. 548,889.16
Add guaranteed net revenue by vendors for 1910	180,000.00
	fl. 728,889.16
Less one dividend, creditors	258,523.34
Remains	fl. 470,365.82

With the capital already in the business, the guaranteed profits of 1910 and the remaining 250,000 florins of the subscriptions, the new company will have ample capital. The 700,000 florins, in shares, remain in porto folio for eventual extension and development of the company.

The reasons for Mr. van Hemert and Mr. H. Benjamins sell-

ing their business are strictly personal; both gentlemen have willingly assisted the new company with their experience in connection with the board of directors.

I think this a very important factor as success in balata business depends entirely on the knowledge of the country and on knowing how to deal with the people and the balata bleeders.

As the directorate and the company are entirely Dutch or Belgian, the prospects are that all the balata produced will go to Europe. The remaining half of the Surinam balata sheet exports are in the hands of two, say three other balata firms.

News of the flotation of the Balata Compagnie, Suriname, referred to in our Dutch Guiana correspondence, was received with much interest in Rotterdam and in Antwerp, and the company's shares went up to 162. Amsterdam remained indifferent.

Inspired, however, by the success of the Balata Compagnie, there has since been floated in Amsterdam, the "Amsterdam Balata Compagnie," with a capital of 1,500,000 florins ($603,000). Col. G. W. Ling, from Demerera, was the promoter. A large concession, or balata grant of 2,000,000 acres, was bought in for the company for 800,000 florins ($321,600).

THE APPROACHING RUBBER EXHIBITION.

FROM time to time, THE INDIA RUBBER WORLD has published information of interest to its readers, relating to the various competitions, to be held in connection with the International Rubber Exhibition that will be opened in London in June, accompanied wherever possible, by illustrations of the prizes or trophies, offered as awards.

Some interesting additions have recently been made to the number of these contests. The Kolonial Wirthschaftliches Komittee, of Germany, has offered the Gold Medal for Services Rendered to Colonial Economic Development, for the best process and method of extracting, coagulating and preparing rubber from Manihot, Kickxia and Ficus.

Private individuals, companies or institutions of any country that has a display at the exhibition, as well as the governments of such countries, can take part in this competition. Competitors must show their methods at the exhibition, by the display of samples of prepared rubber, which shall weigh not less than ten pounds, together with samples of the tools and appliances used, with full and detailed descriptions and drawings or photographs, showing the processes by which the rubber is extracted, coagulated and prepared. The judges are to have the right of testing every sample, tool or appliance entered, and their decision is to be final and without appeal. The competing exhibits will be assembled in one group, suitably distinguished, and the medal will be the absolute property of the successful exhibitor, and will be formally presented to him at the International Exhibition Dinner, to be held in London during the course of the Exhibition.

All entries must be made to the Award Committee International Rubber and Allied Trades Exhibition, Ltd., 75 Chancery Lane, London, W. C., by Thursday night, June 1, 1911, and should be sent by registered mail or delivered by hand, so that a receipt may be obtained for them. Exhibits for competition, properly designated, must be sent direct to the Award Committee, Royal Agricultural Hall, Islington, London, N., and should reach that building not before June 15 and not later than June 25. On all exhibits so sent, the full transportation charges must be prepaid.

Another competition has just been instituted by the ASSOCIATION des PLANTEURS de CAOUTCHOUC, who have presented a silver bowl, value 1,000 francs ($190), to be awarded for the best sample of plantation rubber grown in the Dutch East Indies. Full particulars in regard to this competition can be obtained from the offices of the Exhibition, at the above given address.

The West India Committee has presented two silver cups, which will be awarded (1) for the finest sample of prepared plantation rubber of any species and (2) for the best specimen of balata. The specimens must in each case be sent over with the exhibits of one of the Permanent Exhibition Committees.

The following request, sent out by Mr. A. Staines Manders, manager of the Exhibition, will explain itself and is commended to the attention of all those who contemplate participating in any of the competitions:

> "It will facilitate the working arrangements in connection with the competitions, if those who propose to enter will send their nominations by post as early as possible, and not keep them till the last moment. Every entry is treated confidentially, but it will mean considerable additional labour if the entries are not sent in till the closing day. There is a large amount of detail to be arranged regarding these competitions, and it is for this reason I ask all who intend to enter to please favour me with their entries direct by as early a post as possible."

There being no entrance fee or other charge accompanying these entries, it is reasonable to urge on intending competitors, the propriety of complying, as far as possible with this request, by making their entries and sending in their exhibits as early as possible within the specified period. On application to the offices as above, printed address labels, of a distinctive color, can be obtained, the use of which will obviate any risk of the consignment going astray and ensure it reaching the proper officials.

Owing to the coronation festivities in London, the period of duration of the International Rubber Exhibition to be held in that city this year has been somewhat changed. The opening, to which the press and holders of cards (exhibitors and members of committees will be admitted), will take place on Saturday, June 24, the official opening on Monday, June 26, at noon. The exhibition will be open daily, with the exception of Sundays, from 11 o'clock a. m., until 10 p. m., and will close on the evening of July 14, not as originally planned on July 11.

The attention of intending exhibitors is called to an arrangement whereby they can have invitation tickets printed bearing their own advertisement or any other appropriate device, for distribution among their friends. The proof of such ticket must first be submitted for approval and all such tickets taken up at the door must be reclaimed by the exhibitor issuing them, at the rate of 25 shillings ($6.08) per hundred. They will also be furnished without the exhibitor's advertisement, or can be purchased at the rate of four shillings (97.30 cents) per dozen. The official printers, of whom special information, quotations for printing, etc., can be obtained, are Hill, Siffken & Co., Grafton Works, North Road, Holloway, London, N.

A list of hotels, from which the exhibition is conveniently accessible, with their terms and means of reaching the exhibition from them, has been issued by the management of the exhibition and can be obtained on addressing the offices, but intending visitors, to ensure securing accommodations, should make early application, as owing to the Coronation ceremonies, which will occur in June, London will be fairly crowded for a goodly portion of the period for which the exhibition will be open.

Arrangements for the insurance of the property of exhibitors, from the time of leaving the place of shipment, including risk in transit and at the exhibition, and until delivered back at final destination, may be made through Messrs. Tozer, Kemsley & Fisher, Ltd., insurance brokers, 84 Fenchurch street, London, E. C. If preferred, the exhibits can be insured, while at the exhibition only, against "all risks," or against "fire risks." Forms of proposal and all other particulars may be obtained of the firm as above.

The United States Consul General at Berlin, Germany, reports Germany's imports of rubber-shoes for the year ended June 30, 1910, at 611 tons, valued at $645,694. The exports during the same period, were 107 tons, valued at $83,776.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

IT HAS been repeatedly urged in late years—more particularly by analysts—that the buying and selling of raw rubber ought to fall into line with the procedure adopted in the case of the bulk of other raw materials and be controlled by the analyst's certificate. Up to now, however, no progress at all has been made with the maturing of the suggestion and it is with much interest that I have seen a translation of the scheme put forward by the Dutch Government Bureau for the India Rubber Trade and Industry to practically test the applicability of chemical analysis for this purpose. For three months samples of raw rubber will be tested free and certificates of analysis returned to the sender along with a part of the rubber for use as a sale sample. In the case of plantation or fine Pará or of sheet balata the taking of an average sample both from bulk and in the laboratory should present no great difficulty, but I venture to say that the reverse will be found to be the case with medium and low grade rubbers. The Bureau lays stress on the importance of sending an average sample, though presumably this operation is to be left to the untutored mind at the docks or warehouse. It will be absolutely necessary for the Government to appoint sworn samplers. The alternative to this is the joint sampling by the seller and an independent sampler appointed by prospective purchasers. In saying this I am not making any attack on prevailing commercial morality; I am merely arguing from the general situation in the numerous other cases where raw products are bought and sold on the analysis of what is certified to be a bulk sample. In a good many cases most of the unpleasantness between buyer and seller is concerned with the percentage of water in the goods, and I imagine that this phase will be accentuated in the case of raw rubber. In the case of dry rubber from plantations the moisture question may not become at all acute but a large amount of work will have to be done with such rubbers as contain over 10 per cent. of water before any procedure can be devised which will give results which will be accepted with equanimity by both sides to a sale. With regard to the Dutch development it is distinctly stated that it is being undertaken solely as an experiment and those concerned merely wish to see if the results are such as to commend the new procedure to the notice of the trade. So far the investigators of the movements profess an open mind and in these circumstances nothing should be said or done to discourage them in their course of action. It is inevitable, however, that the scheme will provoke criticism as being in the form of a radical departure from time-honored methods.

THE TESTING OF RAW RUBBER.

THIS company, whose works are situated in Trafford Park, Manchester, near to those of the British Westinghouse Co., Limited, is now largely extending its premises in order to meet the increased demand for its products. The concern is a branch of a well-known Chicago factory, and the English works, which were started two or three years ago, were the direct outcome of what is known generally as the Lloyd George Patent Act. The actual capital of the English company is only £1,000 and it is understood that this will shortly be increased. Mr. Mamsick, who is well known in America, is the general manager and the products are put on the market entirely through Messrs. Somervilles' Sons, of Liverpool and New York. The process is controlled by Price's patents of 1901 and 1904 in which alkali is used, and an objection has been raised by the Northwestern Rubber Co., Litherland, Liverpool, owners of A. H. Marks' patent of 1899, on the score of infringement. The company have had the action pending for some time without entering it for trial and in order to bring things to a head the Regenerating Company applied to the Chancery Court at Liverpool that particulars of the alleged infringement should be given or the action abandoned. As a result of the application, the vice-chancellor directed the Northwestern Company to give particulars of their complaint. The next scene in the drama will be awaited with interest; anyhow, no further prolonged delay is possible—the action must proceed or be abandoned.

RUBBER REGENERATING CO.'S SECOND.

MR. J. G. GRAY is the new works manager at the Gorton Rubber Co., Limited, Manchester. Mr. Gray comes from the Dunlop Rubber Co. at Birmingham, where he has been for a number of years. Mr. Saunders, the late works manager at the Gorton Rubber Co., has gone to the Werneth Rubber Works. These works were offered for sale at auction by Mr. Salmon, the proprietor, two or three years ago, but were withdrawn. Recently a new company has been formed. The works were originally started by Mr. Cresswell when he left the Hyde Imperial Rubber Co., in the same neighborhood.

PERSONAL MENTION AND TRADE JOTTINGS.

Mr. Walter Wild, who comes from the Liverpool Rubber Co., is the new manager at the Wood-Milne works recently erected at Leyland, Lancashire, as previously mentioned. The scope of operations of the Wood-Milne Co. is being extended beyond the well-known heel-pad to mechanical goods and tires.

The increased capitalization of the Midland Rubber Co., Limited, of Birmingham, is due to the fact that they have at last got possession of some house property immediately adjoining their works at Ryland street. This acquisition, about which there has been considerable difficulty, makes it possible to enlarge the works to meet the requirements of the increasing business. The general manager is Mr. J. P. Higgins. The patent in this country of the Doughty high-temperature vulcanizing press, which has been the property of the Dunlop Rubber Co., has recently lapsed and machines are now to be seen at work in competitors' works. Saving of time in the manufacture of cycle tire covers is its principal advantage.

In the course of the expert evidence given in connection with a recent breach of contract just tried in the Manchester Court of Assizes some discussion arose in regard to over-vulcanization and under-vulcanization, a prominent witness who graduated in America laying it down that although uniformity in vulcanization can be expected in goods mostly composed of fine Pará rubber, this is not the case with low quality sheeting, a fact, he said, which is well known to purchasers generally. To give the expert evidence at length would require too much space.

REGRETTABLE AS ARE THE DISASTERS, accompanied in several instances by the loss of valuable lives under deplorable circumstances, that have accompanied the development of aerial navigation, they are no more than we are accustomed to look for in connection with every such radical departure from familiar conditions as are involved in aviation. That they are likely to prevent, or even retard progress in this field, we regard as exceedingly unlikely, rather they may be expected, by supplying the necessary experience on which to base future operations, to encourage the development of the art. We look for notable progress in aviation during the present season, the fact that American manufacturers are beginning to turn their attention, to an increasing extent, to the supply of the bird-men's requirements, being further evidence of the practical confidence with which the ultimate triumph of the flying man is regarded.

RUBBER RECLAIMING LITIGATION IN GREAT BRITAIN.

THE IMPORTANCE attached to successful processes for saving rubber was indicated in an account of impending litigation in Great Britain over patents applying to measurably successful processes of reclaiming, or, as it is designated in England, "reforming" rubber. Our correspondent anticipated active and protracted litigation between the owners of some of these processes, based on their alleged infringement, the invalidity of the patents, etc., but recent information would seem to discredit such a possibility.

The Simplex Rubber Co., Limited, London, who were quoted as one of the probable parties to the anticipated litigation, in a recent communication deny that they are interested in any legal controversy that is likely to mature at an early date. On the other hand, the Gare patents, of which they are the owners, and which they use in their manufacturing processes, emerged triumphantly from attempts made to prevent their issue, on the grounds that they had been anticipated by patents previously granted to Kararodine, on a somewhat similar process. After a careful comparison of the two inventions, as described in their respective specifications, the patent office decided that it would be clearly wrong to stop the granting of a patent in this case, and consequently issued the patent to T. Gare, on his process of "reforming" rubber.

The conclusions on which the comptroller general decided to issue the Gare patent, are of more than passing interest to inventors whose attention is bestowed on this subject, and we quote from them as follows:

"I find therefore that the process applicant desires to patent, comprises, as an essential feature, the placing of india rubber, under pressure, in a mould before it is subjected to heat, and that the opponent in no way describes such essential feature, and I cannot say that the invention in which this feature is essential is patented on an application, the specification of which does not mention this feature. Moreover, I find that the opponent's process comprises, as an essential feature, the heating of the material before compressing, or, in other words, compressing while hot, and that the applicant's process does not comprise any such feature. The fact that in carrying out each process, a stage is reached in which rubber in compression is being heated, would not justify me in finding that the process of applicant has been patented, as alleged."

The Simplex Rubber Co. (Ltd.) expresses perfect confidence in the originality and validity of the Gare patents, the process covered by them being employed in the manufacture of rubber goods of many different kinds and which they claim are equal in quality to the best produced anywhere.

They argue, moreover, that if a commodity for which there is so rapidly increasing a demand as there is for rubber, can be given, so to speak, two or more lives, by a process which enables articles equal in quality to the original to be made at a low cost, then an increase in the use of rubber for many purposes now prohibited owing to its cost will follow, to the ultimate benefit, not only of the community generally, but also of the planter and manufacturer.

REPORTING ON MARKETS ABROAD for American stationery goods, the United States Consul-General in London comments particularly on the American rubber band, which he describes as having won and maintained a hold on the British market by reason of its excellent quality and the conveniently graduated sizes in which it is manufactured. The English product is made only in stock sizes, with considerable variation between them. An interesting differentiation between the American and the English product is that the former is gray and the latter red.

LONDON RULES FOR RUBBER CONTRACTS.

IN contracts of five tons or over, buyers have the right to reject tenders of less than a ton, and in contracts of under five tons, any tender of less than half a ton, except, in each case, in completion of a contract.

When sold for monthly deliveries or shipment, each month a specified part of a month's delivery or shipment, to be treated as a separate contract.

Sellers must provide approximate weights at time of tender and furnish dock and wharf samples, which must be sent by the first sellers to the first selling brokers, whose name must be on the first and subsequent tenders as holding the samples. They must be freshly drawn dock or wharf samples and delivered intact to the first selling broker. Tenders to be good must contain the following information in addition to the name of first selling brokers, i. e., date of contract and price; marks and number of packages; ship's name and dock or wharf where rubber is lying; weight of sample; original or copy of arbitration award (if any). The stipulations provided for shall be deemed to be of the essence of the contract.

The constitution of the Arbitration Committee is next described.

Clause IV provides that when a parcel of rubber is sold under the standard description of "first Latex Hevea Brasiliensis plantation rubber of fair average quality in sheet and (or) biscuit and (or) crêpe form, as at present prepared" for a specified shipment or delivery or for shipment by a specified steamer and found inferior, or if any portion tendered shall be found inferior, buyers shall have the option of rejection and the quantity so rejected, whether the whole, or any portion, shall not constitute a delivery on the contract. Should the time for delivery have expired, the seller must be allowed three clear working days to replace the quantity rejected.

Clause V provides that when a parcel of rubber is sold with a guarantee of quality other than as specified in the foregoing clause for a specified shipment or delivery, and is found inferior, the buyer must accept the same with an allowance, provided the allowance in the opinion of the arbitrators, be not more than two pence per pound, or otherwise, as may be specified in the contract; but if the parcel, or any portion is rejected, the seller is to have the option of substituting guaranteed quality on the spot to fulfill his contract, within three clear working days.

According to Clause IV any parcel arbitrated on with or without an allowance, shall be tenderable on any contract for the same quality and buyers shall accept the same, with the original arbitration award, provided the tender is made within three months from the date of the original tender and the parcel has been left lying intact at a public warehouse.

Any claims under these rules must be made by the last buyer to the first selling broker within three clear working days of the last buyer receiving tender.

Final delivery, on any delivery or shipment contract, must be within 50 pounds of the weight contracted for.

The selling or buying broker guarantees the solvency of his principals in all contracts for rubber unless otherwise specified in the contract.

The rules, of which the above is a brief synopsis, are described as the "Rules and Regulations Governing Contracts for Plantation Rubber" sold under the General Produce Brokers Association of London Rubber Rules.

COMPLAINTS FROM PEDESTRIANS in London that passing automobiles, ploughing through puddles, sprinkle them with mud, have led to tests of a splash guard on motor busses and other vehicles in that city. They are made of a steel mesh and suspended from the hubs of the wheels, the bottoms reaching nearly to the ground. They were found to give effective protection and their compulsory adoption is under consideration.

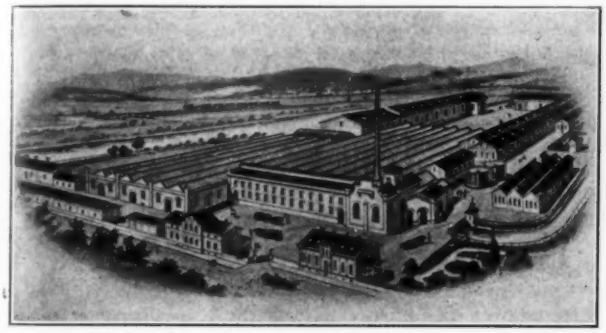
Some Rubber Interests in Europe.

THE DEVELOPMENT OF A GREAT CORPORATION.

THE Vereinigte Berlin-Frankfurter Gummiwaren-Fabriken Gelnhausen, near Frankfort-on-the-Main, in a handsomely printed and artistically illustrated sixteen-page publication (12 x 18 inches) shows pictorially and describes in appropriate text, the growth of its immense plant from its first establishment in 1869, by Messrs. Bergeon, Boeger & Köbig at Frankfort-on-the-Main—Sachsenhausen, where they commenced, on a modest scale the manufacture of surgical and technical rubber goods, to the colossal plant of today, with its great factories at Gelnhausen, at Gross-Lichterfelde, near Berlin, at Grottau, Bohemia, and Dresden, Saxony.

A former mill, located in a spacious landed territory, was the nucleus of the present great plant at Gelnhausen, and as the business grew and various branches were added, the other plants were established; the Bohemian factory being established especially with a view to the supply of the markets of Austria-Hungary, Italy and the Levant.

Today, the capital of this great business, which employs about 2,000 workpeople and manufactures everything in the shape



VEREINIGTE BERLIN-FRANKFURTER GUMMIWAREN FABRIKEN. (GELNHAUSEN WORKS.)

of technical and surgical goods in hard and soft rubber, is 3,500,000 marks ($833,000).

The Vereinigte Berlin-Frankfurter Gummiwaren fabriken, Berlin, held its general meeting recently in that city, at which the dividend for the past year, payable immediately, was fixed at 9 per cent. The prices of raw rubber were represented as still unsettled and although the factories were reported as fairly busy, the prices of rubber goods were stated to be very low.

GERMANY.

The "Astra" Fabrikation und Vertrieb chem. pharm. Präparate, G. m. b. H., has removed its headquarters from Cologne to Bad Homburg.

Poppe & Wirt A. G., Berlin, manufacturing linoleum and rubber, report business satisfactory during the first year of its existence as a joint stock corporation. An 8 per cent. dividend is proposed and the listing of the company's securities on the stock exchange will be suggested to the next general meeting.

Nord Deutsche Gummi und Gutta percha waren-Fabrik, formerly Fonrobert & Reimann. At the general meeting, president Julius Klopstock referred at length to the unsatisfactory result of last year's business, which he attributed to the high prices of rubber, the effects of a strike, and to the fact that the necessary supply of crude rubber had not been provided for filling the contracts. The result, according to an actuary's report, was a depreciation of 180,000 marks in the company's financial standing since 1908. There were, however, said the president, no grounds for apprehension as to the company's condition, and steps had been taken to prevent a recurrence of the unfavorable circumstances. The retiring member of the Board of Trustees, was re-elected.

Gummiwerke Fulda, Akt. Ges. For the second year of its existence, as a joint stock corporation, this company, after writing off 143,960 marks ($34,170) reports the comparatively large deficit of 143,575 marks ($34,170). Last year, the company made a profit of 101,896 marks, and paid a dividend of 4 per cent. Herr Fritz Cremer has been appointed a director of the company.

The jubilee celebration of the 25 years' active connection

WILHELM SIERCKE.

of Herr Direktor Wilhelm Siercke with the Hannoversche Gummi-Kamm-Co., Aktiengersellschaft, of Hanover, took place recently. He has been on the board of the company as commercial director, since the beginning of 1902.

Hannoversche Gummi Kamm Co., Act. Ges. Frankfort-on-the-Main, has removed from its former place of business in that city to much more spacious quarters at Nidda Strasse, 74, near the main railroad station, where they will be able to carry a stock commensurate with their steadily increasing business. The Board of Directors recommended the distribution of a dividend of 25 per cent., same as last year.

Mannheimer Gummi-Guttapercha und Asbest fabrik A. G. Mannheim, will pay a dividend of 10 per cent. The profits for the past year equalled those of the preceding twelve months, in spite of the increased price of raw rubber and the dissolution of the asbestos syndicate.

Deutsche Kabelwerke, Berlin-Rummelsburg. The directors have decided to pay a dividend of 8 per cent., as compared with 7 per cent. for last year.

THE HOUSE OF A. W. FABER, Stein, near Nuremberg, Bavaria, famous the world over as manufacturers of lead pencils, will celebrate, this year, the 150th anniversary of its establishment. To commemorate the event they are placing on the market a Jubilee pencil of exceptionally good quality and attractive appearance and they announce the fact in an illuminated folder of artistic design and execution, which they are sending to their customers and friends.

Vereinigte Hanfschlauch und Gummiwaren fabriken at Gotha At the general meeting recently held, 831,000 shares were represented and the dividend, immediately payable, fixed at 15 per cent. It was unanimously resolved to increase the capital stock by 800,000 marks ($190,400), making the total capital 3,000,000 marks ($714,000). The additional 800,000 marks will not share in dividends until January, 1912, and 325,000 marks of the proceeds will be used for the purchase of the Frankfurter Gummiwaren fabrik, the balance to be disposed of to present stockholders at the rate of 6 to 1. Concerning the trade of the first quarter of 1911, it was reported that there had been an increase of 15 per cent. and that business was very lively. The directors, in commenting on the fact that speculation in crude rubber was declining, stated that this was probably due to the appearance in the market of large quantities of good plantation rubber, which competed actively with the Pará supply.

C. Mueller Gummiwaren fabrik, joint stock company, Weissensee-Berlin, at the recent general meeting, at which 362 shares were represented, fixed the dividend at 8 per cent. It was also decided to remove the company's headquarters from Berlin to Weissensee, where the entire business is now concentrated.

The Neue Automobilreifen Fabrik G. m. b. H., Berlin, has been dissolved. The liquidation was effected by the former managing salesman, Hans Below, of that city.

FRANCE.

The Continental Société Anonyme de Caoutchouc Manufacturé, of Paris, which recently made an addition of 1,500,000 francs ($283,000) to its capital, has declared a dividend of 20 per cent.

J. B. Torrilhon, founder and for many years head of the well-known firm of Torrilhon, and one of the earliest to engage in the rubber manufacturing industry in France, is dead, aged 87 years. The business will be continued by his two sons.

M. Lipschitz and B. Jacobowitz, have established a business as dealers in rubber waste at Montreuil-sous-Bois, with a capital of 20,000 francs ($3,800).

Société Anonyme des Bandages Elastiques Audré, has been formed at Châtellerault, capital 500,000 francs ($95,000).

The former manager of the Bordeaux branch of the firm of Poncin Dusendschön & Co., dealers in crude rubber, Paris, Mr. R. Van Baer, has severed his connection with the firm to start in business for himself. Henri Heilman, of the main office in Paris, has been placed in charge of the branch in question with full powers.

DENMARK.

Skandinavisk Gummi og Cycle Depot, Andersen & Kloster. Rubber and bicycle dealers, has been registered commercially at Odense. A. H. Andersen and J. S. Kloster, proprietors.

Kabelfabrik Aktieselskabel Nordiske Kabet og Traad fabriker, with factories in Copenhagen, Frederiksberg and Middlefart, has distributed for 1910 a dividend of 6 per cent., compared with 5½ per cent. in 1909, and 4 per cent. in 1908. In place of the deceased privy state councillor J. Glueckstadt, his son, bank director Emil Glueckstadt, has been elected chairman of the Board of Directors.

GREAT BRITAIN.

Cairns Tyre Co., Ltd., has been formed, with a capital of £80,000 ($389,320), to carry on the automobile tire business heretofore conducted by J. Cairns & P. Collins, at Walsall. The company's specialty is a patent stud tire, which, while essentially pneumatic, obtaining its efficiency through confined air, is constructed on an entirely new principle, involving division of the air tube into sections, each with two or three air spaces.

Mr. J. W. O. Walker has resigned his position as general manager at the new works of the Wood-Milne Co., Limited, at Leyland, a step which has caused some surprise in the trade. It is not so many months ago that Mr. Walker gave up the position of general manager at Messrs. Reddaway & Co., Limited, to take up the post he has just vacated at the new Wood-Milne works, where tires and mechanical goods are to be made in addition to the well-known heel pads.

F. REDDAWAY & CO., LIMITED (Manchester, England), manufacturers of camel's hair belting and sphincter grip hose, is represented in Mexico by Alfredo Lockhart; headquarters Puebla.

RUSSIAN ADVICE CONCERNING RECLAIMING.

TO THE EDITOR OF THE INDIA RUBBER WORLD: SIR.—According to all accounts, the business of reclaiming rubber in America does not flourish, because the Russian rubber reclaiming works, of which there are only two in Russia, compete actively with them in Europe in the sale of reclaimed rubber, being able to purchase old rubber shoes at a less price than their American competitors.

When old rubber shoes are exported from Russia, an export duty of 1½ rubles per pood (77¼ cents per 36.11 pounds) must be paid on them, while on shipments of reclaimed rubber there is no export duty, consequently old rubber shoes cost the Russian manufacturer, in addition to freight and insurance, 1½ rubles (77¼ cents) per pood less than the American rubber works must pay for them, so that the Russian rubber reclaiming works can compete successfully in Europe with the American works in the sale of reclaimed rubber.

In America, the Russian rubber works cannot compete with the American rubber reclaiming works in the sale of reclaimed rubber, because the latter have managed so that America levies a duty on reclaimed rubber.

That, however, about fifty American rubber reclaiming works allow themselves to be crowded out of the European market by two Russian rubber works is hardly credible.

The associations of American rubber reclaiming works are constantly holding meetings and endeavoring to force down the prices for old rubber; it would have been much more sensible on their part if they had united to use every effort to obtain the repeal of the Russian export tax on old rubber shoes.

If the American government cannot succeed in effecting this result through the Russian government, they should endeavor to influence the German government to get this change effected in Russia. America could induce Germany to do this, with the alternative of placing an import tax on various German products.

Germany can compel Russia to allow the exportation of old rubber shoes without duty because, in the Russo-German tariff agreement of July 15-23, 1904, under Section 11 it places the export tax on rubber waste at 1½ rubles per pood (= $.2575 per 36.1130 pounds) but this cannot be held to include, in any case, old rubber shoes.

On the 7-19 March, 1906, the Russian customs bureau has decided that old rubber shoes should come under this classification and that an export tax of 1½ rubles per pood should also be collected on them, but this is improper; first, because old rubber shoes cannot be classed as rubber waste, then again the Russian customs bureau had no right to make such a decision in 1906, because the tariff agreement with Germany had already been entered into in 1904.

Consequently Germany can very easily put this through, if America will induce them to do it.

The export tax on rubber wastes has been brought about in Russia by two Russian rubber works; is it not possible for fifty American rubber reclaiming works to induce their government to aid them in this respect, the more so as the Russian customs bureau had no right to order, in 1906, that an export tax must be paid on old rubber shoes?

If the Russian rubber works have in this manner worked against the American rubber reclaiming works the latter should not hesitate to work against the Russian rubber works.

A. IVANOW.

St. Petersburg, 22 January (4 February), 1911.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED MARCH 7, 1911.

NO. 985,780. Rubber footwear. M. C. Clark, Providence, R. I.
985,811. Shut-off for hose. D. S. Kellam, assignor of one-half to C. T. Lemmon—both of Atlanta, Ga.
985,884. Anti-skidding vehicle-wheel. M. Clark, Chicago, Ill.
985,935. Tire-armor. H. M. Ramsay and A. McGary, assignor of one-third to J. W. Campbell—all of Houston, Tex.
986,007. Shield for vehicle-tires. J. E. Joslen, Los Angeles, Cal.
986,049. Puncture-proof tire. T. M. Eynon, Philadelphia, Pa.
986,050. Puncture-proof tire. Same.
986,081. Nipple attachment for rubber hose. J. S. Patterson, Chelsea, Mass., assignor to Revere Rubber Co., Boston, Mass.
986,162. Manufacture of sheet india-rubber. T. Gare, New Brighton, England.

Trade Marks.

46,238. Miller Bros. Star Shoe Co., Cleveland, O. The word *United*. For boots and shoes.
52,865. Akt. Ges. Fur Seil-Industrie, Mannheim, Germany. The word *Epata*. For mechanical goods.

ISSUED MARCH 14, 1911.

986,452. Vehicle-wheel. H. C. Gibson, New York.
986,543. Billiard-table cushion. J. S. Burroughes, Seaford, England.
986,637. Inner tube. J. T. Lister, Cleveland, O.
986,670. Vehicle-tire shoe. T. F. Baldwin, New York.
986,712. Vat-washing-machine ring. H. Hipp, Staufen, Germany.
986,930. Tire. V. O. Mervine, Stroudsburg, Pa.
986,948. Resilient wheel. E. S. Shanklin, Oakland, Cal.
987,009. Wheel. V. O. Mervine, Stroudsburg, Pa.
987,026. Hose-coupling. H. W. Thomas, Charleroi, Pa.
987,047. Detachable rubber heel. C. H. Chapman, Winchester, Mass., assignor to Chapman Detachable Rubber Heel Co., a corporation of Maine.

ISSUED MARCH 21, 1911.

987,216. Metal rim for vehicle-tires. J. C. Cole, assignor to The Fisk Rubber Co.—both of Chicopee Falls, Mass.
987,230. Hose-patch and applying-tool. B. Hoover, assignor of one-third to J. M. Slaughter, both of Meridian, Miss.
987,292. Tire. W. D. Furey, assignor of one-half to W. T. Anderson—both of Norfolk, Va.
987,344. Tire and tire-carrying rim. J. S. Clarke, London, England.
987,523. Tire-saver. L. Willour, assignor to The Ashland Mfg. Co.—both of Ashland, O.
987,668. Vehicle-tire. E. C. Bruen, Brooklyn, N. Y.

ISSUED MARCH 28, 1911.

987,751. Cushion-tire. A. W. Shank, assignor of five-sixteenths to each, A. P. Mott, W. W. Tackabury—all of Detroit, Mich.
988,045. Cushion-tire. D. J. Thayer, Pittsburg, Pa.
988,060. Heel. L. Andrews, Newton Upper Falls, Mass.
988,085. Resilient tire. C. A. Fox, Taft, Cal.
988,201. Elastic wheel. J. C. MacLachlan, assignor of three-fourths to A. P. Hunt—both of Chicago, Ill.

Trade Marks.

49,917. The Fisk Rubber Co., Chicopee Falls, Mass. Letter *F*. For pneumatic tires for vehicles.
52,637. The Canfield Rubber Co., Bridgeport, Conn. The word *Tricot*. For rubber washers.
52,951. C. A. Daniel, Philadelphia, Pa. The word *Dreadnought*. For rubber vehicle tires.
53,708. The Gandy Belting Co., Baltimore, Md. A green stripe on side of belt. For canvas belting.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at ten cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the application, which in the case of these listed below was in 1909.

**Denotes Patents for American Inventions.*

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 1, 1911.]

25,165 (1909). Rubber cushion for typewriter keys. J. Johnson, Brighton.
25,166 (1909). Gutta-Percha cement for leather. A. Vernon, Abersychan, Monmouthshire.
25,208 (1909). Vehicle wheels. J. G. A. Kitchen, Scotforth, Lancashire, and I. H. Storey, Loughrigg Brow, Ambleside, Westmoreland.
25,242 (1909). Billiard table cushion. J. S. Burroughes, London.
25,536 (1909). Electric insulation. Seamens Bros. & Co., London.
25,547 (1909). Rubber tapping knives. G. S. Brown, Talawakelle, Ceylon.
*25,588 (1909). Vehicle wheels. W. C. State, Akron, Ohio.
25,652 (1909). Treads for tires. H. H. Allyn, F. E. Partridge and F. H. Ward, Montreal, Canada.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 8, 1911.]

25,907 (1909). Vehicle wheels. N. Hornstein, London.
25,987 (1909). Vulcanizer. T. Carrara and A. Zeppegno, Turin, Italy.
26,084 (1909). Hot water bottles. O. G. Moseley, G. H. Blick and D. Moseley & Sons, Ardwick, Manchester.
26,094 (1909). Vehicle wheel tires. A. Whiteway and C. Macintosh & Co., Manchester.
26,148 (1909). Elastic articles; especially wheel tires. H. Herzfelder, Berlin, Germany.
26,303 (1909). Vehicle wheel tires. L. Brown and C. Macintosh & Co., Manchester.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 15, 1911.]

26,474 (1909). Vehicle wheel tires. D. C. Thomas, Bronwydd, Glamorganshire, Wales.
26,522 (1909). Vehicle wheels. P. Oakes, Burnley, Lanc.
26,593 (1909). Vehicle wheel tires. T. Dunn, London.
26,645 (1909). Vehicle wheel tires. R. T. Smith, Warrington, Lanc.
26,671 (1909). Tire cleaning device. A. B. Davis, Southsea, Hants.
26,699 (1909). Vehicle wheels. Soc. Michelin Et Cie, Clermont-Ferrand, Puy-de-dome, France.
27,017 (1909). Vehicle wheel tires. J. L. Lemoine, Paris.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 22, 1911.]

27,130 (1909). India rubber, etc. C. Dreyfus, A. Friedl, W. H. Bentley and Clayton Aniline Co., Manchester.
27,147 (1909). Vehicle wheel tires. G. W. Beldam, London.
27,162 (1909). Vehicle wheel tires. A. Whiteway and C. Macintosh & Co., Manchester.
*27,255 (1909). Vehicle wheel tires. T. J. Clark, Milwaukee, Oregon.
*27,352 (1909). Vehicle wheels. W. F. Jenkins and R. L. Jenkins, Richmond, Va.
27,398 (1909). Artificial india rubber, etc. E. Black, London, and G. A. Morton, Liverpool.
28,540 (1909). Portable vulcanizer. M. Bouchet, Paris.
27,608 (1909). Vehicle wheel tires. R. Latour, Menin, Belgium.
27,711 (1909). Skate wheels. S. Dawes, S. H. Dawes and R. A. G. Dawes, Shirley, Southampton.
27,727 (1909). Vehicle wheel tires. H. Merrylees, Waterloo, Liverpool.
27,744 (1909). Flexible tubes. F. Gratieux, Paris.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 29, 1911.]

*27,777 (1909). Rubber flange for inkwell. R. H. Brown, Sheepshead Bay, L. I., and R. J. Brown, Tottenville, S. I., N. Y.
27,834 (1909). Vehicle wheel tire. E. Hawley and A. H. Collier, London, England.
27,964 (1909). Vehicle wheel tires. F. S. Novotny, Marschowitz, Bohemia, Austria.
28,084 (1909). Vehicle-wheel tires. A. E. Marchant, London.
28,152 (1909). Vehicle wheels. F. L. Lane and R. G. Sharp, Leeds Forge, Leeds.
28,228 (1909). Vehicle wheel tires. D. France, Collyhurst, Manchester.
28,239 (1909). Vehicle wheel tires. H. Lemorchant and A. Tomlins, London.
28,305 (1909). Rubber-tapping knives. H. S. Sculfer, Talawakelle, Ceylon.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

419,966 (November 9, 1909). L. Marteaux. Improvements in wheels with elastic tires.
420,040 (September 5, 1910). F. H. Hall. Reinforced inner tube for pneumatic tires.
420,067 (September 6, 1910). I. Francois. System of flexible tires for automobiles and wheeled vehicles drawn by animals.
420,090. (November 13, 1909). P. L. Legrain. Armored rubber.
420,071 (September 6, 1910). A. R. Van der Burg. Elastic tire for vehicle wheels.
420,074 (September 8, 1910). E. J. Lesieur. Pneumatic tire for vehicle wheels.
420,232 (August 18, 1910). Vian. Tires for wheels of all descriptions of vehicles.
420,248 (September 2, 1910). N. A. Leonet. Vulcanizer for repairing air tubes and envelopes of pneumatic tires.
420,317 (November 19, 1909). E. Jaume. Sectional air tube for uniform interior pressure.
420,321 (November 20, 1909). H. Dogny and V. Henri. Process of making mixtures of caoutchouc and other plastic substances.
420,414 (September 15, 1910). J. A. G. M. Durien. New pneumatic tire.
420,455 (September 16, 1910). C. Schmidt. Non-skidding tire.
420,529 (September 17, 1910). A. A. Perrier. Pneumatic tires for vehicle wheels.
420,674 (September 19, 1910). F. Perody. Armored envelope for pneumatic tires.
420,772 (December 2, 1909). H. Pataud. Elastic tire for the wheels of vehicles.
420,909 (September 30, 1910). B. B. Hill. Improvement in pneumatic tires.
421,062 (October 4, 1910). A. B. Heimbach. Improvements in rubber heels for footwear.

421,118 (October 5, 1910). Société Saint Cou, Caplen Bauer & Co. Wheel tread of transverse leather bands for the wheels of heavy vehicles.

421,144 (October 6, 1910). F. Sobolewski. Pneumatic wheel.

421,402 (October 13, 1910). W. Holecek and L. Letz. Process of manufacturing envelopes for pneumatic tires and non-skidding treads.

421,354 (October 12, 1910). A Dejardin. Grinding apparatus for rubber plants and vines and other substances.

421,333 (October 11, 1910). A. T. Collier. Process of manufacturing a flexible substance, with the aid of rubber and other similar substances.

[NOTE.—Printed copies of specifications of French patents can be obtained from R. Robet, Ingenieur-Conseil, 16 avenue de Villier, Paris, at 50 cents each, postpaid.]

THE THERMOID-LA FLEUR TIRE.

A DISTINCTIVE feature of the automobile tire illustrated here is the tread surface, composed of a special wear resisting fiber, made moisture proof by a secret process, and

SECTION OF THERMOID-LA FLEUR TIRE.
[Showing position of fiber in special tread.]

inseparately combined with rubber, so that the end of each fiber extends to the surface and wear and tear are resisted to an unusual extent. [Thermoid Rubber Co., Trenton, N. J.]

"TIRES: THEIR USE AND ABUSE."

AT a recent regular monthly meeting of the Electric Vehicle Association of America, the topic of the evening was an address, on the above subject by D. C. Swander, of the Firestone Tire and Rubber Co., Akron, Ohio. He embodied some useful practical information on the care of tires in his paper, including a table of the tire sizes considered best for specified loads and a discussion, consisting mainly of questions addressed to the author followed the reading of the address. The Firestone Tire and Rubber Company have republished the address, which contains much real information of value to all interested in motor truck tire equipment, in pamphlet form, with illustrations of the Firestone side wire channel and flange tire types, copies of which can be obtained from the company on request.

A NON-SKID GRIP FOR SOLID TIRES.

A NEW non-skid grip for solid tires, has been invented by Leonard Gaylor, Stamford, Conn. It is a two-part double ring that encircles the wheels, on each side of the felloes the rings being connected by a large number of narrow straps bent over the tread surface and which form the non-skid grips. The two parts of the ring are hinged together at one connecting point and bolted together at the other, and can be made adjustable at the latter point, if desirable. The device, owing to its flexibility, does not interfere with the resiliency of the tire and the latter takes care of any bending strain brought to bear against the ring. It can be adjusted to fit wheels and tires of different sizes.

"RUBBER Tires and All About Them"—a boodk for everybody who has to do with tires.

GROWTH OF THE CHEWING GUM BUSINESS.

SINCE the incorporation, in 1899, of the American Chicle Co., with a capital of $9,000,000, the business of manufacturing chewing gum has grown enormously. The American Chicle Co. consolidated six young concerns having total average earnings of $540,000 and the new company was reported as controlling 85 per cent. of the entire trade. The fact that the company paid, last year, a dividend of 6 per cent. on $3,000,000 of preferred capital stock and 18 per cent. on $6,000,000 of common stock, affords an indication of its prosperity.

The growth of the business was revealed when in the latter part of 1908 a petition for a reduction in the import duty on chicle gum was presented to the Committee on Ways and Means of Congress, by the American Association of Chewing Gum Manufacturers. Outside of the American Chicle Co., which, as above stated, had merged six concerns, it bore the signatures of 17 independent companies. Since the above date, five of the more important of these independent concerns have been consolidated by the formation, in 1909, of the Sen-Sen Chiclet Co., a Maine corporation with a capital of $2,700,000 in bonds and $4,000,000 in stock.

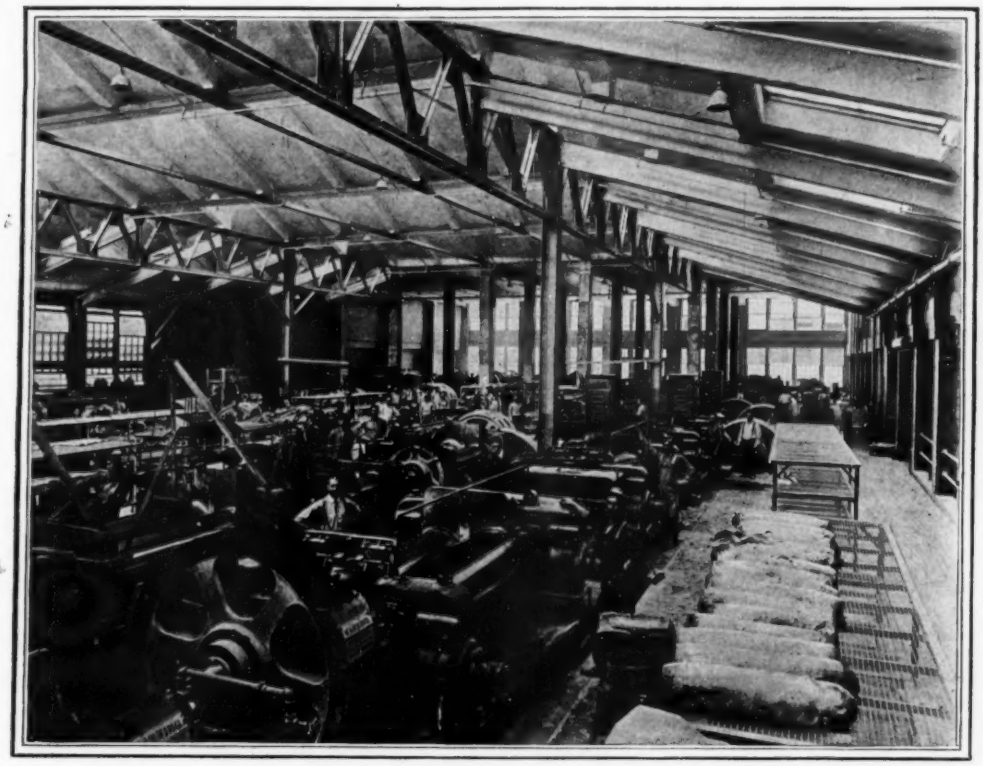
CANADA, it seems, is to figure more largely in the chewing gum trade. Letters patent incorporating the Canadian Chewing Gum Co., with $1,000,000 capital were recently issued under the seal of the secretary of state of the Dominion. The chief place of business is to be in the city of Toronto. The incorporators named in the official notice are Charles Forsyth Ritchie, barrister at law; James Henry Oldham, student at law; and Margaret Cassie Fenwell, Genevieve Ozburn, and Lily Hull, stenographers—all of Toronto. The chewing gum industry has been carried on in Canada for some time. When the American Chicle Co. was incorporated, in June, 1899, one of the six concerns participating was S. T. Britten & Co., of Toronto, reported to be averaging $4,000 in profits a year, and Mr. Britten was one of the original directors.

THE new Canadian company starts out as "Successor to American Chicle Co. and Sen-Sen Chiclet Co.," with offices at No. 405 Logan avenue, Toronto. The Sen-Sen Chiclet Co. at its organization took over the business of Frank H. Fleer & Co., Inc., of Philadelphia, with a branch factory in Toronto, and the business of this company has since sustained close relations with that of the American Chicle Co. The allied companies conduct their business in Europe under the style Tutti-Frutti Sen-Sen Co., Limited, of London, organized in May, 1910.

ATTACHING RUBBER TO LEATHER.

OWING to the grease the last-named substance contains, it is very difficult to secure rubber to a leather surface. The *Gummi Zeitung* recommends, as best adapted to accomplish the purpose, quick, cold vulcanization process, using strong chloride of sulphur solution. The leather must first be superficially freed from grease by treatment with benzine, applied by means of a brush or sponge, which dissolves the grease and carries it into the interior substance of the leather away from the surface. It is also recommended to apply powdered pumice stone, heavy spar, chalk or some similar substance to the dried leather surface after washing out the grease, not using too much however as this would form a dust layer between the rubber and the leather and prevent adhesion. The rubber surface must be coated with a rubber solvent or cement, so that its substance when pressure is applied, will be forced into the porosities of the leather, and it should be allowed to dry well on the rubber before the two are brought together. If the work is given proper time to dry after vulcanization, a good adhesion can be effected it is claimed in the manner above described.

THE accepted authority on South American rubber—"The Rubber Country of the Amazon," by Henry C. Pearson.



THE MILL ROOM

Here the rubber is rolled or milled to give it proper consistency. This is the next step after the cleaning and drying of the crude. In other words this picture shows the manufacture of rubber. Further on, the rubber is patterned into articles of sale, and cured.

This department, representative of the equipment of the plant of the B. F. Goodrich Company, is the largest and most completely equipped Mill Room in the world.

NEW YORK BELTING AND PACKING CO., Ltd.

MANUFACTURERS OF A COMPLETE LINE OF HIGH GRADE

MECHANICAL RUBBER GOODS

Including Cobb's Piston & Valve Rod Packing, Indestructible White Sheet Packing Vulcan High Pressure Spiral Packing, "1846" Para Rubber Belting, Magic Garden Hose, Air Brake, Air Drill, Steam, Suction, Water Hose, etc.

Original Manufacturers of Interlocking Rubber Tiling.

Nos. 91-93 CHAMBERS STREET, NEW YORK

RUBBER BELTING

"SHIELD HIGH-GRADE" BRAND

Every foot guaranteed in strongest possible manner

We make everything in rubber

Our warrant is indelibly stamped upon every Belt to protect the user

Write for Catalog and prices

THE MECHANICAL RUBBER CO., CLEVELAND, OHIO

Rubber Sundries Manufacturers' Association.

THE annual meeting of the Rubber Sundries Association was held this year on the thirteenth of April at the Waldorf-Astoria and closed with a banquet that was fully up to the best that the association has ever enjoyed, which is saying much. At the business meeting preceding the banquet, the following officers were elected for the coming year: George B. Hodgman, president of the Hodgman Rubber Co., president; Fred. Hall Jones, president of the Tyer Rubber Co., vice-president; Edward E. Huber, of Eberhard Faber, secretary and treasurer.

GEORGE B. HODGMAN, PRESIDENT.

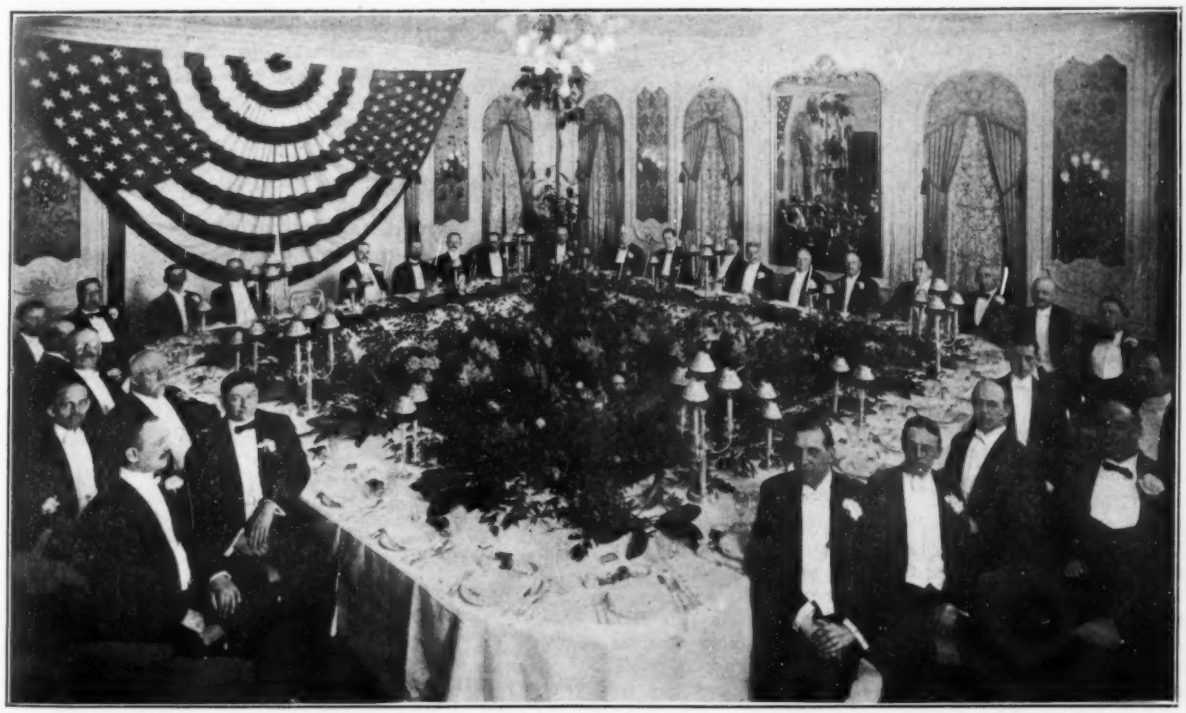
HON. WILLIAM A. PRENDERGAST.

The members of the association and their guests began to assemble about seven o'clock and a brief half-hour's sociable was indulged in, after which, the president leading the way, all present filed into the banquet room. The guest of honor was the Honorable William A. Prendergast, Comptroller of the City of New York. Included among the other guests were Henry C. Pearson, the editor of THE INDIA RUBBER WORLD; Edward R. Rice, sales manager of the U. S. Rubber Co.; W. E. Barker, manager of the branch stores of that company and others.

The tables were set in the form of a hollow square, enclosing a sunken garden that was a mass of roses, rubber plants and other exotics.

The dinner, the menu of which follows, was one of the Waldorf's best and served with a deft promptness that was admirable.

During and between the courses a trio of banjoists delighted the diners with their rollicking vocal and instrumental selections which were exceptionally well rendered. In the post prandial exercises President Hodgman proved himself an exceedingly graceful, sympathetic toastmaster. After paying a tribute to the memory of the late president of the association,



BANQUET OF THE RUBBER SUNDRIES MANUFACTURERS' ASSOCIATION.

Henry C. Burton, he introduced the Honorable William A. Prendergast. Mr. Prendergast had slipped away from another banquet and had arrived just in time to dine with the rubber men. Mr. Prendergast spoke for about half an hour, easily, forcefully, wittily. His remarks were chiefly confined to vital metropolitan problems, methods of municipal finance and the like, and he held the undivided attention of his hearers from start to finish. He also impressed his hearers as a man of extraordinary force and with an intimate knowledge of every detail of city affairs. His wonderful quickness in repartee was also a feature that all appreciated and enjoyed.

Huitres de Cape Cod
Gombo de volaille, printanière
Radis Céleri Amandes salées Olives
Filet de kingfish, sauce aux crabes d'huitres
Tomates farcies aux concombres
Tournedos d'agneau, sauce Colbert
Macédoine de legumes à la crème
Pommes de terre, palestine
Pample nousse au marasquin
Pintade du printemps, sauce au pain
Salade de romaine
Mousse de fraises, sauce Chantilly
Petits fours Fruits
Café
Pommery Sec

Mr. Prendergast was followed by the editor of THE INDIA RUBBER WORLD and by Mr. Howard E. Raymond in brief speeches.

Next was introduced Mr. A. Radcliffe Dugmore, a mighty hunter of big game, whose field of operations centered largely in the great English Protectorate of Uganda on the east coast of Africa. Mr. Dugmore for the last few years has given up the practice of securing lion's skins and buffalo heads for trophies

SOUVENIR OF THE RUBBER SUNDRIES BANQUET.

for the more modern and indeed the more dangerous sport of stalking big game and photographing it in its lairs. The lecturer showed a series of colored stereopticon views, which comprised daylight pictures of antelope, zebra, giraffe, African buffalo, rhinoceri and hippopotami, followed by a series of flashlight pictures of lions with an occasional hyena and jackal, these pictures being taken at all hours of the night when the beasts were feeding at some recent "kill." Naturally the photographer had many adventures and narrow escapes which he told with much spirit. Incidentally he mentioned having seen many plantations of Ceara rubber up in Uganda and that they were promising well.

A very pleasant feature of the Sundries dinners has been a souvenir presented to each guest while at the table. This year it was a most artistic box of hammered silver, the top and sides very richly ornamented with figures and scroll work in relief, the inside lined with gold. Its office is to adorn a smoking set and hold the matches. It is a question, however, if it is not more likely to be used as a jewel case.

President Hodgman and Secretary-Treasurer Huber, the dinner committee, were warmly congratulated at the evening's close upon their success in arranging a banquet, every detail of which was so perfect.

OFFICIAL ANALYSIS OF RUBBER BY THE DUTCH GOVERNMENT.

TO insure uniformity in the valuation of crude rubber, in connection with its purchase and sale, the Bureau for the Rubber Trade and Industry, maintained under the management of Dr. G. van Iterson, Jr., by the Dutch government, with the permission of His Excellency the Minister of Agriculture, Industry and Trade, arranged to analyze all samples of rubber, gutta-percha and balata during the months of February, March and April of the current year, free of charge and give a certificate of the results of this analysis. The chemical analysis consisted of:

1. Determination of moisture.
2. " " resins.
3. " " inorganic impurities.
4. " " organic impurities.

In a circular letter, sent to all Dutch importers, brokers and manufacturers of rubber, specific instructions as to the character of the samples required and the manner of sending them were given and it was explained that the sample would be divided into three parts, of which one part would be used by the Bureau for the analysis, a second kept by the Bureau as a control sample and the third part returned to the sender, duly marked and accompanied by the certificate of analysis, to be shown with the certificate, when the rubber is offered for sale.

It is further stated in the circular, that taking into consideration the fact that the physical properties of rubber, i. e., its elasticity, etc., are of great importance in its valuation, the Bureau has arranged to install the necessary machines and apparatus for making this determination and will devote special attention to this branch of the subject. The circular is accompanied by a specimen of the form of certificate of analysis that will be given.

The above work is undertaken by the government experimentally, for the purpose of deciding whether such an analysis would be of sufficient value to the rubber trade to make its permanent prosecution advisable.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha for the month of February, 1911, and for the first eight months of five fiscal years, beginning July 1:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
February, 1911.....	$138,926	$99,330	$501,688	$739,944
July-January	1,215,134	1,600,041	3,397,718	6,212,893
Total, 1910-11.....	$1,354,060	$1,699,371	$3,899,406	$6,952,837
Total, 1909-10.....	1,233,910	1,437,252	3,053,753	5,724,915
Total, 1908-09.....	896,362	1,013,544	2,454,707	4,364,613
Total, 1907-08.....	924,585	1,305,352	2,485,307	4,715,244
Total, 1906-07.....	801,238	918,569	2,321,211	4,041,018

THE above heading "All Other Rubber," for the last eight months, includes the following details relating to Tires:

MONTHS.		For Automobiles.	All Other.	TOTAL.
February, 1911.....	*values*	$179,047	$49,007	$228,054
July-January		1,015,673	319,022	1,334,695
Total, 1910-11.....		$1,194,720	$368,029	$1,562,749

Annual Meeting of the Rubber Club of America.

THE annual meeting of the Rubber Club of America was held on the evening of Monday, April 17, at the American House, Boston, Mass. Mr. George P. Whitmore, having been elected chairman, called the meeting to order at 7.10 p. m. A motion that the reading of the minutes of the preceding meeting be dispensed with, having been carried, the secretary presented his annual report, which was read as follows:

FREDERIC C. HOOD, PRESIDENT.

FRANCIS H. APPLETON, VICE-PRESIDENT.

SECRETARY'S REPORT.

Another year having passed, the Club enters on its twelfth year in fine condition, with the largest membership in its history, of 266, there having been thirty new members added during the year, while four have passed beyond.

There have been two entertainments during the year—the usual mid-summer outing, held at the Riverside Recreation Grounds on July 19, and the mid-winter dinner, held at Delmonico's, New York City, on January 11. Both were much enjoyed by members and friends. The Club is greatly indebted to the special New York committee for the great amount of time and work put in to make the New York dinner a success, which, with one exception, was the largest attended dinner we have ever had.

The Executive Committee and sub-committees have held several meetings during the year pertaining to Club matters.

Our membership in the Massachusetts State Board of Trade has been maintained.

The past year has taken from us four esteemed members: *Geo. P. Eustis, Chas. F. Baker, Henry C. Burton, Frank W. Veazie.*

Their absence at our meetings will be a great loss and their memories long cherished. Appropriate resolutions have been engrossed and sent to their families.

Good fellowship prevails among our members. There are no dissensions and the outlook for the success and prosperity of the Club is bright.

Respectfully submitted,
GEORGE H. MAYO, Secretary.

The report having been unanimously accepted and ordered on file, the report of the treasurer was presented and read as follows:

TREASURER'S REPORT OF CONDITIONS AS OF APRIL 1, 1911.

Receipts.

Bank Balance—April 1, 1910	$121.19	
Received for dues to April 1, 1911, from Members	1,239.99	
Received for Initiations—New Members	115.00	
Received from Members for Banquets, Outings, etc.	1,867.62	
		$3,343.80

Disbursements.

Expenses for Banquets, Outings, etc.	$3,125.10	
Sundry Printings	18.85	
Sundry Postage	13.84	
Bank Collections	1.20	
Death Resolution—C. F. Baker	3.00	
Clerical Work	40.00	
Annual Dues—Massachusetts State Board of Trade	25.00	
Expenses four Delegates—Deep Water Convention	12.00	
Bank Allowance—April 1, 1911	104.81	
		$3,343.80

(Signed) J. FRANK DUNBAR, Treasurer.
(Approved) F. E. STONE, Auditor.

The report, having been unanimously accepted, was ordered placed on file.

Action was then taken on a proposed amendment to the constitution by which Section I of Article IV, relating to officers, which provided that "the officers of the club shall be a president, a vice-president, seven honorary vice-presidents, a secretary, an assistant secretary and a treasurer, who with seven directors shall constitute the executive committee," be changed to read "nine directors" instead of "seven directors." A motion adopting the change was made and carried.

The election of officers for the ensuing year being the next business before the meeting, the report of the nominating committee was presented and read. The committee offered, in connection with the report, an explanation to the effect that having had in view the fact of the change in title of the club from "The New England Rubber Club" to "The Rubber Club of America," they had been guided in their selection of nominees in order to make the club truly representative, by an effort to include among them members representing all parts of the country and every branch of the rubber trade. On motion, there being no objection, the secretary cast one ballot for the following ticket, which was declared unanimously elected:

President: Frederic C. Hood, of Boston, Mass.
Vice-President: Francis H. Appleton, of Boston, Mass.
Treasurer: J. Frank Dunbar, of Boston, Mass.
Secretary: Frank D. Balderston, of Boston, Mass.
Asst. Secretary: Harold P. Fuller, of Boston, Mass.

For Honorary Vice-Presidents:

George H. Hood, of Boston, Mass.
Hon. Augustus O. Bourn, of Providence, R. I.
Hon. L. Dewart Apsley, of Hudson, Mass.
John H. Flint, of Andover, Mass.
Alexander M. Paul, of Boston, Mass.
Arthur W. Stedman, of New York City.
Henry C. Pearson, of New York City.

For Directors:

Elisha S. Williams, of New York City.
H. E. Raymond, of Akron, Ohio.
Homer E. Sawyer, of New York City.
George P. Whitmore, of Boston, Mass.
Frederick H. Jones, of Andover, Mass.
Elston E. Wadbrook, of New York City.
Robert L. Rice, of Boston, Mass.
George B. Hodgman, of New York City.
George H. Mayo, of Boston, Mass.

There being no further business, the meeting adjourned.

THE EDITOR'S BOOK TABLE.

THE CULTIVATION OF HEVEA. A MANUAL FOR THE PLANTER. By Dr. P. J. S. Cramer, director of agriculture in Surinam. Translated from the Dutch by Stuart R. Cope and A. Content. Amsterdam: J. H. de Bussy. 1911. [8vo. Pp. 132. Cloth, 5s.; paper, 4s.]

THE author, a competent botanist, embodies in this work, the sults of his visit, at the request of the Dutch government, to a number of rubber estates in the Malay peninsula and Ceylon, where he investigated the methods of cultivation and preparation of hevea rubber. The subject is treated in a very thorough manner, as may be gathered from the sub-titles—preparatory arrangements, maintenance of the plantations and tapping, which includes the treatment of the latex and the packing of the finished product—the entire work being written as a manual for the planter, rather than as a treatise for the general reader. The book contains forty illustrations, for the most part showing prevalent conditions in the country visited.

ARGENTINE TARIFF LAW. PUBLISHED BY THE PAN AMERican Union, Washington, D. C. Paper. 8vo. 33 pp. with index xx pp. Price 25 cents.

A CAREFULLY prepared pamphlet in which the original Spanish of all the schedules is given along with the English, to prevent misunderstanding. The index has been prepared, not merely from the law itself, but also from the appraisement schedules, annual statistical reports of imports and the customs ordinances so that it is more a subject digest than a simple index.

SOIL AND PLANT-SANITATION ON CACAO AND RUBBER Estates. By Harold Hamel Smith, member of the West India Committee, etc., with an introduction by Professor Wyndham Dunstan, M.A., LL.D., etc., Director of the Imperial Institute. John Bale, Sons & Danielsson, Ltd., London. [Cloth. 8vo. Pp. 632. Price 10s. net.]

A WELL PRINTED, readable book, in which the author takes the position that diseases prevalent in plants should be treated on lines similar to those affecting human beings, taking the greatest care to keep them free from diseases and pests, or making every effort to eradicate them. Rubber is very fully discussed, special chapters being devoted to Castilloa, Ceará, Funtumia and wild rubbers generally, the questions of tapping rubber, rubber machinery and factories are fully discussed. Many other subjects that will interest officials, planters and investors are considered.

OTHER BOOKS RECEIVED.

SCIENCE AND INDUSTRY. [THE PRESIDENTIAL ADDRESS DEtivered at the seventeenth general meeting of the American Electrochemical Society, Pittsburgh, May 5, 1910.] By Leo Hendrik Bakeland. [New York: 1910. Paper. 8vo. Pp. 37-53.]

PROCEEDINGS OF THE AMERICAN INSTITUTE OF ELECTRICAL Engineers for April, 1911, containing the usual accounts of meetings held and to be held, papers, discussions and reports. Published by the Society at New York. Paper. 8vo. 844 pp. Price $1.00.

THE AGRICULTURAL LEDGER, 1910, NO. 1. FIRST HALF A-K. DEvoted to a detailed description of the races of rice (*oryza sativa*) in India. Published by the Superintendent of Government Printing, Calcutta, India. Paper. 8vo. 33 pp. Price 1s. 2d.

NEW TRADE PUBLICATIONS.

SYRACUSE RUBBER COMPANY (Syracuse, N. Y.), publish an illustrated catalogue of the weather-proof clothing they market under the trade marks "Goodyear's Bear Brand," "Tower's Oiled Clothing" and "Good Wear" horse covers, wagon covers and storm clothing of every description. The special features of each article are fully set forth, and the illustrations are of an originally artistic type; 24 pages, 6 x 9½ inches.

CHARLES E. MILLER (Anderson, Indiana), publishes a profusely illustrated catalogue of his vulcanizers and specialties for rubber goods manufacturers and repair men. Everything to which it refers is illustrated and fully described and prices quoted, making it a complete handbood of 28 pages (8½ x 5¾ inches) of the goods he manufactures.

BOSTON BELTING CO. (Boston, Mass), in a neatly printed and illustrated booklet of 16 pages, 6 x 3½ inches, set forth the merits of their "Roxbro" braided hose, for air and water. It describes the gradual development of the perfected article, its special merits and the uses for which it is designed, and quotes prices on the various makes and sizes.

THE H. O. CANFIELD COMPANY (Bridgeport, Conn.), in their Catalogue B (48 pages, 6 x 9 inches), describe and illustrate their line of plumbers' rubber supplies. The line is a complete one and clearly printed illustrations and a carefully compiled index make it a handy publication for dealers in these goods.

"A STORY IN FOUR CHAPTERS" is the title under which the Fisk Rubber Co., Chicopee Falls, Mass., publish a booklet descriptive of the advantages to be gained by carrying extra tires inflated, all ready to put on in case of puncture. In the case that forms the subject of the illustrations, ten minutes were consumed in making the change and a section of the Fisk Tire, with its removable rim, shows how this remarkable saving in time and trouble is effected. The photographs illustrating this neatly printed booklet, 7 x 5 inches, were made on the street, while the tire was being changed.

RUBBERIZED X-RAY PROOF ARMOR.

DOCTORS and surgeons, making use of the X-ray apparatus for the examination of patients or the preparation of radiographs, are frequently exposed to painful and at times serious injury from the highly concentrated electric light beams. A specially designed armor or costume, that is proof against these rays, is described in *La Presse Medicale*, Paris, by Dr. Paul Aubourg, and is illustrated herewith. It consists of a long tunic, made of fabric impregnated with lead, rubber and bismuth, which is worn over the ordinary operating robe, thick gauntlet gloves of the same material and rubber boots, and a helmet and mask of rubber that completely covers the head, the nose being protected by a broad nose piece, and the eyes by spectacles or goggles of a lead glaze, the whole presenting a startling appearance strongly reminiscent of the costume worn by the inquisitors in the old time torture chambers. A somewhat similar costume has been adopted by the physicians who are attending the victims of the plague in the Far East, with the exception that in this case the entire outfit is of rubber and the helmet impregnated with iodoform.

DOCTOR IN X-RAY PROOF COSTUME.
Courtesy of The Sun, New York.

ERRATUM.

In an article entitled "New Process for Coagulating Castilloa," in the March 1 number of THE INDIA RUBBER WORLD, errors occurred in the conversion of German marks into United States currency. For 13 marks, the price obtained for the crude rubber, an equivalent of $1.40 was quoted, this should have been $3,094, while the price paid for the gum resin 7 marks, should have been given at $1.666, in place of about 75½ cents, as quoted.

The Obituary Record.

GEORGE PICKERING EUSTIS.

THE death of George P. Eustis, treasurer of the American Rubber Co., Boston, which occurred on the morning of April 4, removes another of the well-known figures that were instrumental in building up that very successful company. Mr. Eustis was born in Bangor, Maine, where he received the usual common school education, coming to Boston to seek his fortune when he was twenty years of age. He tried his hand at many things, incidentally becoming an expert accountant and in the '70's came with the American Rubber Co. under Robert B. Evans as bookkeeper, auditor and general financial man. Later he became both secretary and treasurer of the company, and made a record as a painstaking, capable and thoroughly reliable official.

In his quiet way, he made many friends and even when the burden of years and increasing ill health, began to press upon him, he never complained, but met all with the same modest cordiality and forgetfulness of self that was one of his chief charms.

THE LATE GEORGE PICKERING EUSTIS.

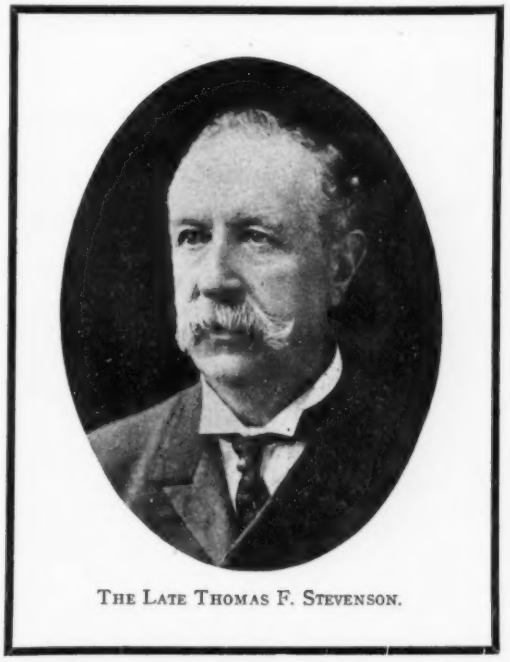
His wife, who was Miss Emma Rolfe of Boston, died several years ago, since when Mr. Eustis made his home at the Hotel Wadsworth until his death. He belonged to several fraternal organizations as well as to Massachusetts Lodge F. & A. M., St. Andrew's Chapter and Boston Commandery, K. T., and the Rubber Club of America. Mr. Eustis left no immediate family, his nearest relatives being a sister and four nephews in Bangor, Maine, and one nephew in Waterbury, Conn.

Interment services were in Mt. Auburn Chapel, the burial being in the family lot in that cemetery. Services were conducted by the Reverend Edward Cummings, pastor of the South Congregational Church, the music being under the direction of Albert W. Snow, of the Church of the Advent. Many relatives and friends were in attendance, including prominent business men from Boston; representatives of Masonic bodies; officials of the American Rubber Co., and members of the Rubber Club of America.

THOMAS F. STEVENSON.

The period of the early expansion of the rubber manufacturing business will be vividly recalled to many of the readers of THE INDIA RUBBER WORLD by the decease on the evening of April 20, at his residence in Brooklyn, N. Y., of Thomas F. Stevenson. Deceased, who had been ailing for about ten months, and whose death was due to a complication of ailments, had attained the ripe age of seventy-two years.

When some twenty years ago the rubber manufacturing business showed its first real expansion, one of the first effects of the development was the demand for the complete new and mechanical equipment of a large number of factories. In these changes Mr. Stevenson took a prominent part, as a dealer in machinery, a business in which he was actively engaged for a number of years, including a connection of upwards of thirty years with the Birmingham Iron Foundry. In arranging for the installation of calenders, grinders, etc., of increased capacity, his knowledge of the requirements of the different manufacturers, his extensive acquaintance in rubber trade circles and the confidence reposed in him, enabled him to place the superseded machinery with smaller and less ambitious concerns, to the mutual advantage of both parties to the transaction.

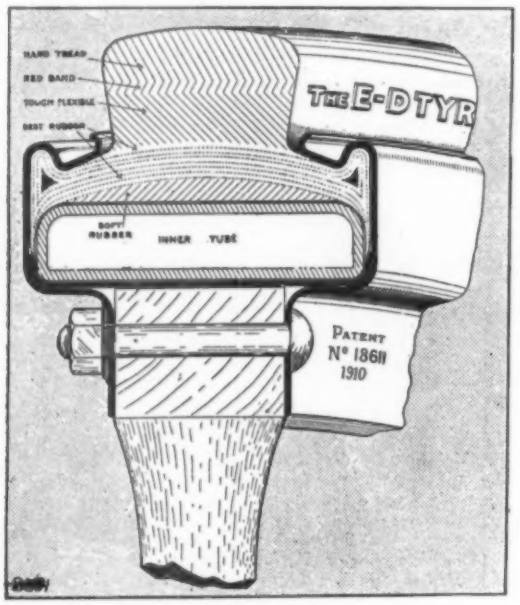


THE LATE THOMAS F. STEVENSON.

A native of Brooklyn, having passed all his life in the city of his birth, with the exception of some ten years spent in Shanghai, China, and having lived for upwards of thirty-seven years in one locality, deceased enjoyed the widespread esteem and respect of his neighbors and fellow citizens. This was revealed in the number and beauty of the floral tributes with which the house was fairly filled, on the occasion of the funeral services, conducted by the Rev. T. C. McClelland, pastor of the Memorial Presbyterian Church, of which deceased was for many years a member. He was likewise a veteran Free Mason and one of the older members of that organization in Brooklyn. He leaves a son and daughter, his wife having died several years ago. The interment took place in Greenwood cemetery, on April 22.

A "SOLID PNEUMATIC" TIRE.

A TIRE that is said to possess all the advantages of the solid and pneumatic types, combined with greatly increased durability and efficiency, is at present undergoing exhaustive test in England, preparatory to being placed on the market. The following brief description will explain with the accompanying illustration, the construction of this new style of tire, which is known as the "E. D. (Evans-Doubleday) solid pneumatic" tire, and is especially recommended as adapted for light, high-speed, commercial vehicles, such as taxicabs, delivery wagons, etc. Attached to the wooden felloes of the wheel is a steel rim, somewhat wider than the wooden rim, which acts at once as a bed for the inner tube and as a band for the wooden felloes. Clamped to the two sides of the wooden felloes, by means of bolts, are side flanges, of pressed steel, one attached permanently, the other removable, to provide the demountable feature, indispensable in tires of this class.



THE E. D. "SOLID-PNEUMATIC" TIRE.

The tire proper, consists of an inner tube and a solid shoe, the former being of the type commonly used with the inflatable pneumatic tires and equipped with the usual valve; the solid portion is made up of a flexible band of canvas and rubber, which provides for the inward movement against the air tube and has a bead at each edge, to form at one side a lock with the rim, and on the other, in extended taper form, a protection for the inner tube that guards against the possibility of nipping. The tread portion consists of a narrow layer of red rubber, on which the tread proper, made of an elastic and very tough quality of rubber, is mounted. When the tire has been worn down to this red surface, it can be retreaded and its life thus indefinitely prolonged.

The heavy rubber tread is designed to act as a shock absorber, to take up the violent rebound inseparable from the ordinary pneumatic tire, when running on a rough road, so that with the cushioning property of the pneumatic the hard-wearing quality of the solid tire is effectively combined. It is claimed, that in the event of any injury to the inner tire, resulting in its deflation, it can be run as a solid tire without injury to tire or vehicle, until the necessary repair can be effected. As soon as the practicable value of the tire has been satisfactorily demonstrated, steps will be taken to place it on the market.

FOREIGN MARKETS FOR RUBBER TIRES.

SUPPLEMENTING the communications from United States consuls in foreign countries, on which the article under caption in the March number of THE INDIA RUBBER WORLD was based, the Department of Commerce and Labor makes public some further reports, bearing on the same subject, from which we abstract the following information:

The consular agent at Markneukirchen, Germany, states that the sale of automobiles in his district is steadily increasing and that tires are now kept in stock by several firms in the different cities. The main highway to the Bohemian spas, passes through Adorf, the last German town where tires are kept in stock. Dealers in this town and in Bad Elster, a nearby Saxon spa, have a considerable sale for tires among tourists visiting this section with their automobiles. Most of the tires sold are of two well-known French and German makes.

Bicycles are used quite extensively and there is a good demand for tires, the only foreign tire sold being of American make. To compete with the home and foreign tire manufacturers, the consul is of the opinion that the establishment of branch houses and sending out of travelling representatives would be necessary.

The United States consul at Barmen, Germany, reports an entirely undeveloped field for the introduction of rubber tires for wagons of all kinds. The city has 160,000 inhabitants and the only vehicles with rubber tires are the ambulances. He considers the opportunity for an enterprising concern handling goods of this description as excellent. He recommends the establishment by the manufacturer, of a branch agency.

The United States vice-consul, at Genoa, Italy, states that the tires of the three leading Italian manufacturers, enjoy the largest sale in that country, but several foreign makes are also sold, including some Americans. The fact that Italy imported in 1909, 402.9 tons of rubber tires, of a value of $1,379,381, and for the first ten months of 1910, 792.9 tons, valued at $3,519,683 and that this ratio of increase has been maintained for several years past, is a fair indication of the importance of the trade. Of the imports quoted for the first ten months of 1910, Germany furnished 300.5 tons, France, 220.9 tons; Great Britain, 202 tons and all other countries, 69.5 tons. Personal representatives, familiar with the language and business methods of the country, would be necessary to reach the Italian market, according to the consul's opinion, who considers the present an opportune time to introduce American automobile tires into Italy, and who does not see why American manufacturers should not obtain a share of the business.

The American vice-consul general at Shanghai, China, describes the market for rubber tires in his district, as limited, most of those used coming from Great Britain or France and only a negligible quantity from the United States. He refers particularly to the increasing number of jinrikishas—the light, man-hauled buggies of the far East—that are being equipped with rubber tires and to the active efforts some of the foreign manufacturers are making to increase their business in this direction. A man on the spot and conspicuous advertising, are pointed out as likely to prove valuable factors in securing the trade.

From Kobe, Japan, the United States consul reports a large and growing sale for rubber tires for bicycles and jinrikishas, the trade being mainly in the hands of the English houses. A local representative or an arrangement for representation by a local firm, are pointed out as likely to bring results.

The consul general of the United States at Guatemala City, Guatemala, Central America, reports a considerable number of carriages in that city equipped with rubber tires, mostly of American make. Of 40 automobiles in the city, about 30 are of American manufacture, there are a few motorcycles, no motor-trucks, and bicycles are popular and numerous.

Asbestos as a Commercial Product—II

THE mechanical treatment of asbestos was first undertaken by a Scottish company. In the following two years, other concerns took up the problem. The general procedure seems to have been pretty much the same. A crusher was employed to break up the raw material, which was then screened. The crushed rock, dropped from the screen on to a revolving table, where the barren rock was elimmated by hand picking. The remaining material was dried in a kiln, from which it went to the rolls, to be crushed fine. It was soon found that what was needed was an apparatus that would break up the rock without destroying the fiber. Two such machines have been found successful. One is called the Beater, and the other the Cyclone.

PREPARING TO BUILD ASBESTOS MILL, ASIATIC URALS.

The Beater consists of a shell of a boiler, containing a shaft armed with knives or "teeth." When the shaft is in motion a churning of the material within is the result. The material may be fed into it continually, as it discharges the churned material automatically. The Cyclone apparatus is used the most, as it works with greater speed. This apparatus is a castiron receptacle, containing two shafts, one on either side, and shaped like propellers. These operate in opposite directions and the commotion caused is tremendous. The material ground up in this way is discharged through a suction pipe which deposits it on a vibrating screen.

Much of the asbestos picks up bits of iron and steel during these processes, and this is eliminated by means of an electro magnet. This magnet is placed sometimes at the external end of the discharge pipe or sometimes over the vibrating screens.

In quarrying asbestos bearing rock, the methods of the larger and smaller concerns still differ somewhat. The serpentine rock which contains the chrysolite will often be interrupted here and there by pillars or walls of hard rock containing no asbestos. The smaller concerns seek to keep down expenses by leaving these in. The larger concerns, however, disregard this transient economy, knowing that it will be necessary to remove these pillars and walls sooner or later in order to deepen the excavation. The smaller mines are therefore irregular in plan, while the larger ones conform to a definite form. For example, the main pit of King Brothers' mine has a fairly regular outline. In 1904 it was about 700 feet in length and averaged about 200 feet in breadth. The bottom of the excavation was not kept at one level. A few years ago the maximum depth of the pits was about 165 feet. A single 40-horsepower cableway could, if operated continuously in the one line of service, handle about 25 or 30 tons per hour. But, because of their service ability for purposes other than removal of spoil from the pit, it is necessary or advisable to have more cableways than the amount of spoil would indicate, and placed at strategic points. One concern was employing several years ago, eight cableways, although the material to be brought to the surface was only about 50 tons per hour.

All asbestos lands in Canada which belong to the Crown can be acquired either by purchase of concession or may be occupied and worked under a mining license. Any person may prospect without a license, however.

The mines of Canada to-day produce the major portion of the asbestos used in the industrial world. But for six decades or more, it was known that Canada possessed this mineral, but the fact was not considered of commercial importance.

BOO-KOO-SUN ASBESTOS PROPERTY, MONGOLIA.

RICH ASBESTOS PROPERTY, MIASS DISTRICT, ASIATIC URALS.

However, in 1877, a farmer named Fecteau discovered deposits of importance, and the first real mine began operations shortly afterwards. It is said that the enterprise was a paying one from the start. Seven mines in all were opened in the first few years. One of these is said to have paid $24,000 net in one year upon an investment of $6,000.

In 1880, the Canadian output was only 380 short tons. This had a value of $24,700, or $65 per ton. For a number of years, production and total value increased. In 1888, the output decreased slightly, but the value did not. With this exception, the eleven years following 1879 witnessed a constantly growing production. The value never failed to rise. In 1890, there were produced 9,860 tons, valued at $1,260,240, or nearly $128 per ton. Since then the output has been on the whole on the increase, but the value per ton never again reached the high-water mark of 1890. In 1904, Canada produced 35,068 tons, having a value of $1,154,566, or $32.92 per ton. Pretty much the whole of the total production is exported, the bulk coming to the United States. Thus, in the ten years 1895-1904, Canada exported to the United States a total of 151,848 tons, having a value of $4,497,318, or an average ton value of $29.62. Great Britain imported 26,048 tons in the same period, the value being $1,337,025, or $49.43 per ton; and Germany took 15,214 tons, having a value of $600,402, or $39.46 per ton. Ten concerns in 1903 were operating their mines and plants, employing about 1,500 men at an average yearly wage of about $273.

Asbestos was first mined in Italy, and prior to 1880 it was the only country that produced it at a commercial profit. It was found in the Susa and Aosta regions and in the district of Valtellina. The best quality from Italy is found in the Susa region and is of the horn-blende or amphibole variety. It differs from chrysotile in that the latter is a hydrous silicate of magnesia, while the hornblende species is silicates of lime and magnesia with an earthy base, part of them only hydrous.

The Italian asbestos is very silky in appearance and grey to brown in color. Often the fibers are several feet in length. Its heat resisting power is about the same as that of chrysotile, but it has not the strength of the latter nor are its deposits as sure. In the Susa district it occurs on the sides of the mountains and, therefore, its mining is difficult. These mines vary from 3,000 to 7,000 feet above sea level. Usually shafts are driven, the blasting being accomplished by dynamite. The ore is taken out in the form of lumps of hard bundles of fibre. It is then loaded onto sleds or toboggans and coasted down the mountain side, and two men can bring down 8 cwt. of asbestos in 3 hours. When the day's work is finished the asbestos is bagged up as it is and sent to the factories.

At the factories it is cleaned and separated into 3 grades: One, long fibers for weaving; two, short fibers for manufacturing asbestos papers, etc.; three, asbestos powder, part of which is used for cement and the rest is sold for land dressing.

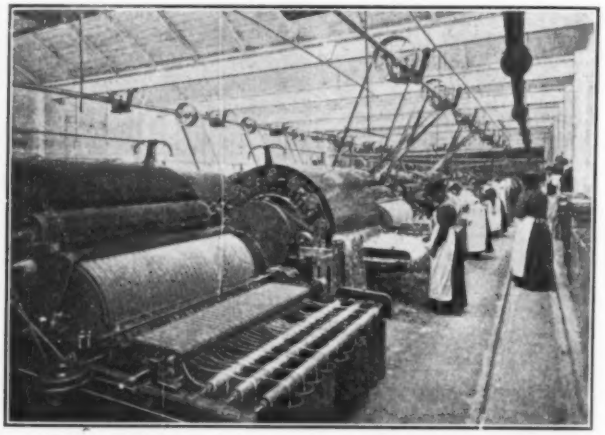
This hornblende asbestos although of very good quality will never probably compete with the serpentine variety of Canada. In the first place the mining problem is a difficult one, calling for hand labor. Secondly, the fibers although long are of indifferent strength and special, intricate machinery has to be used, and lastly, the supply is not as certain as is the Canadian.

Asbestos upon leaving the cobbing sheds is sent to the spinning mills, in bags holding about 100 pounds. Upon its arrival it is first fore-carded by a machine similar to the saw-tooth gin used in cotton mills. This separates the tangled fibers; after which a final carding takes place on a regular carding machine. When the asbestos leaves the carding machine it is combed smoothly and the fibers laid parallel, in a uniform mass. This mass is treated in a rota-spinning machine. This first spins it into a coarse yarn and then draws and spins this yarn until it becomes fine and quite strong. Where a hard strong thread is required for certain fabrics, the asbestos yarn is put into a doubling and twisting machine where two or more of the yarn threads are combined. Of course if the asbestos is to be impregnated with rubber a smooth hard finished thread is not desirable. In asbestos spinning roller cards are used almost entirely. Perfectly carded asbestos should be clean, uniform of web, no knots or matted places and no impurities. The weaving is done usually on power looms similar to those used in cotton mills. The crossing of the warp is done in different ways, depending upon whether the article to be produced be a simple fabric or a compound weave in which a varied number of filling threads is used.

A simple fabric is that which is made up of a cotton warp and an asbestos filling thread, as are also fabrics that are made to be coated on both sides with rubber. The simple weave makes the "stiffest" and strongest fabric, owing to the equal number of its threads, and this is an essential feature in waterproof fabric, which must be of great flexibility and strength.

The spinning of asbestos for a long time seemed of great difficulty, owing to the manner in which the threads persisted in slipping past each other. Finally it was discovered that, under the microscope a thread of asbestos showed a notched and serried surface and that by means of special twisting the spinning could be made successful. Now, after much experimenting manufacturers are able to spin a single asbestos thread of 100 yards in length, not weighing over an ounce and possessing considerable strength.

SPINNING DEPARTMENT, UNITED ASBESTOS CO., LONDON.

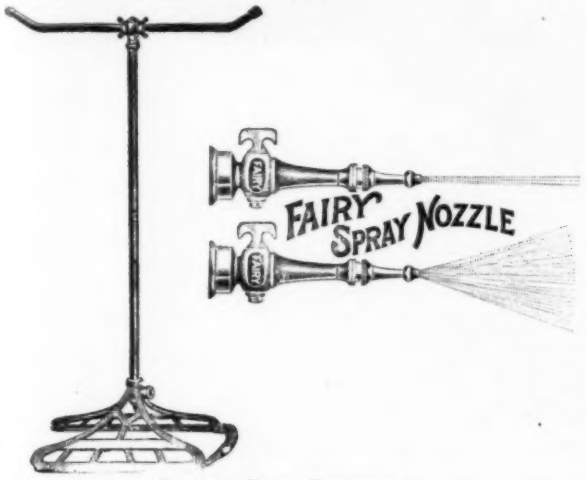


WEAVING DEPARTMENT, UNITED ASBESTOS CO., LONDON.

New Rubber Goods in the Market.

A NEW LAWN DEVICE.

An effective lawn sprinkling device is the new "Putting Green" which stands 44 inches high and which rests on a large malleable iron sled. Heavy tubing is used in the arms and by means of the adjustable nuts at the top; these arms can be adjusted and held at any desired angle, which also permits variation in the form of the spray.



Improved Lawn Sprinklers.

Another new and popular device is the "Fairy" spray nozzle, which is made in regular and extra heavy weight; the last named being in considerable demand in the New England trade. [W. D. Allen Manufacturing Co., Chicago, Illinois.]

RUBBER GRIPS FOR LEVER HANDLES.

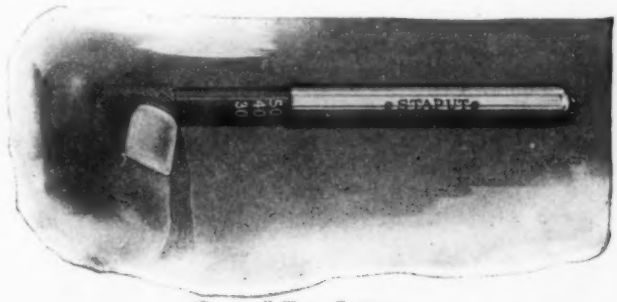
On a long run, especially on crowded thoroughfares and where the driver of an automobile is kept busy manipulating the levers, releasing and setting up clutches, putting on and taking off speeds, etc., the hard metal lever handles are apt to cause sore and fatigued hands, while a sudden "dab" for a lever, as often as not results in a painful bruise, to say nothing of rust-stained hands and gloves and roughened skin. A rubber grip, fitted to these handles, is an easy and permanent remedy for these disagreeables and provides a reasonably comfortable hand-hold, in place of the bare, cold metal. Even the tiresome operation of "pressing the button" on top of the clutch handle is made easy by the cushion formed by the bulb on top of the grip. The device illustrated herewith is the only grip made for this purpose and has "caught on" wherever automobilists have seen it. [The Goodyear Tire and Rubber Co., Akron, Ohio.]

Rubber Lever Grip.

THE "STAPUT" TIRE GAUGE.

Nothing contributes more to the longevity of automobile tires and the prevention of tire troubles, to say nothing of wear and tear on car and passengers' comfort, than a properly preserved pressure in the air chamber, something it is impossible to ensure without a reliable tire pressure gauge. Such a device is illustrated herewith—the Staput Tire Gauge.

With the ordinary tire gauge, the reading, to make use of a colloquialism, had to be caught "on the fly" and in whatever position the valve to which the gauge was attached happened to be—upside down, in shadow, etc. This the gauge under consideration obviates. It does not drop back to zero as soon as the air pressure is released by its removal from the tire, but as its name indicates, remains in the position to which the air pressure has forced it, until it is purposely returned to place by hand. It consequently permits of just as accurate reading when removed, as when in place on the tire.



"Staput" Tire Gauge.

It is sent out, enclosed in a neat leather case, and can be obtained from dealers in accessories or from the manufacturers. [J. A. Bowden Co., Chicago, Illinois.]

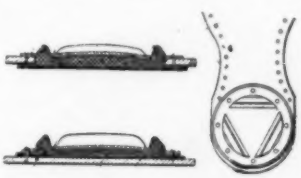
A NEW STYLE RUBBER SHOE FOR WOMEN.

The new "Stage" style rubber for women, introduced this year, is shown in the accompanying illustration. It is an ultra high heel style, with full broad toe and has been designed to fit the "Stage" last leather shoes, recently placed on the market. [Goodyear's Rubber Glove Co., Naugatuck, Connecticut.]

New "Stage" Style Women's Rubber.

A RUBBER PLATE FOR BASE-BALL SHOES.

To take the place of the spiked shoe, worn by baseball players and other athletes, which is open to many objections, J. P. Kline, Brooklyn, Michigan, has designed the rubber plate illustrated herewith, on which U. S. Patent, No. 982,278, has been issued to him. The dark-shaded portion, in the upper one of the accompanying illustrations, shows the rubber part, held in position by a sheet metal plate riveted through the sole. In the lower diagram, a method of attaching the rubber, without cutting through the sole, is shown. The manner of attaching the rubber heel plate is also is shown. The rubber heel plate is also shown attached.



Rubber Shoe Plate.

RUBBER AIDS TO THE FOUNTAIN PEN.

Having brought the fountain pen to a high degree of perfection, the makers of the Ideal Fountain Pen have placed on the market a number of "little things" that very materially add to the convenience and utility of the fountain pen in general and Waterman's Ideal Fountain Pen in particular. As these devices, if not made wholly of rubber, are dependent on rubber for their efficiency, we give them brief space in the columns of THE INDIA RUBBER WORLD.

The Ideal Joint Opener will save many a broken section and obviate the use of pliers and other tools that were never intended to be used on fountain pens. Without injuring the finest holder, it enables the tightest joint to be readily unscrewed. The illustration explains the manner of its use.

IDEAL FOUNTAIN PEN CLEANER.

The Ideal Pen Cleaner is even more indispensable to the fountain pen owner. Slipped over the threaded end of any sized point-section, as shown, its alternate compression and release draws and discharges water through pen and feed thoroughly cleansing the passages.

IDEAL FOUNTAIN PEN JOINT OPENER.

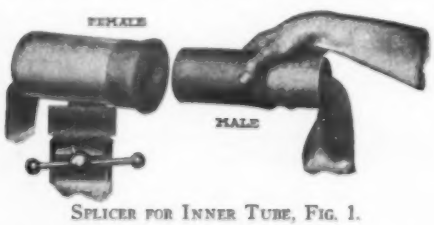
For filling a fountain pen the old style glass filler, still in use and illustrated herewith, has been replaced by progressive pen owners of the Ideal filler.

It holds enough ink to fill any ordinary pen and the long tube enables the pen to be filled from the bottom up, the formation of air bubbles being thus prevented, a solid pen full of ink is secured by withdrawing the filler as the ink is squeezed into the pen.

[L. E. Waterman Co., New York.]

A QUICK REPAIR FOR INNER TUBES.

A SMOOTH and permanent splice, it is claimed, can be made in an inner tube, with the aid of the device illustrated herewith, or, when it is impossible to make such a repair, a new piece can be spliced in with its aid and the tube made practically as good as new. In performing the operation one end of the tube is inserted in the male splicer and turned back 2½ inches, as shown in Fig. 1.



SPLICER FOR INNER TUBE, FIG. 1.

The other end of the tube is then inserted in the female splicer, turned back as shown and the parts washed with benzole or gasoline to remove all foreign substance allowing time for its evaporation. A coat of cement is then applied to the parts and allowed to dry for ten minutes, the female splicer is placed in a vise and the male registered in the female as in Fig. 1.

SPLICER FOR INNER TUBES, FIG. 2.

Acid solution is poured into a small porcelain vessel and with a clean brush is applied to the tube on the made splicer by passing the hand from the bottom over the top and down the other sides, moistening the entire surface; the male splicer is then pushed into the female.

The brass rollers on the male splicer automatically effect the splice, which completes the operation as in Fig. 2. [M. & M. Manufacturing Co., Akron, Ohio.]

A USEFUL POCKET SCREW DRIVER.

EQUIPPED with four blades of different widths, contained in a telescope handle and so retained, by a spring device that while they can readily be removed for use, they will not rattle or fall out if the cap is removed, each blade can be instantly and firmly screwed in the handle for use. The blades are 3/32, 5/32, ¼ and ⅛ inches wide, and the smaller sizes can be used to replace a boring tool to make holes in wood to facilitate driving the screws. The handle of the tool is covered with hard rubber for insulation, so that if used anywhere about electrical apparatus, there is no possibility of the transmission of shock. Being nicely ribbed, a firm grip on the handle is assured. Extra blades, of any desired size, can be obtained at small cost. For working among electric wires, adjusting electrical apparatus, etc., this is an ideal tool for the pocket or the kit. [The L. S. Starrett Co., Athol, Massachusetts.]

THE CABINET PORTABLE OVEN.

A PORTABLE oven, made of galvanized sheet steel are designed to generate, with small consumption of fuel, a high degree of heat, without radiating it into the surrounding air, is illustrated herewith. The walls are all made double, the outer walls being lined with a special make of air-cell asbestos, which, with the intervening air space, makes an excellent non-conductor of heat.

The oven can be arranged for heating with either artificial or natural gas, coke, coal or wood. To ensure the even circulation of heat, the fire box is separated from the baking chamber immediately above it, by a double plate, having an air space between it and the baking space above; the back of the baking chamber is divided from the hot-air chamber in the back, which is a continuation of the hot-air chamber at the bottom, by means of a single plate, in which there are slats to provide for uniform distribution of the heat.

Each shelf or baking compartment is provided with an independent door, which, when opened, drops down to a horizontal position, forming a shelf that facilitates the introduction or removal of articles, and minimizes the loss of heat.

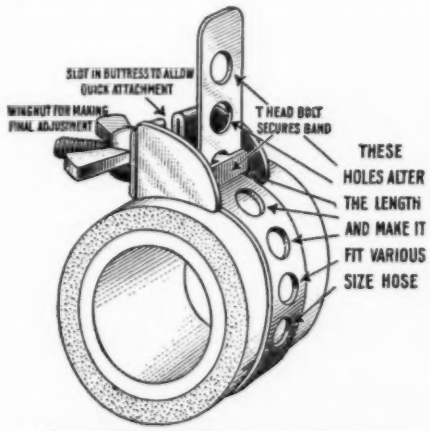
The cabinet oven, which is made in several styles and sizes, is adapted for vulcanizing rubber goods or baking cores, enameling, etc. [The G. S. Blodgett Co., Burlington, Vermont.]

A NEW ANTI-SKID TIRE.

THE extent to which the serious results that may follow the skidding of the wheels of an automobile is realized, is reflected in the endless variety of devices, mostly tires of the no-skid variety, that have been brought out from time to time. A recent addition to their number is the Stein Double Cushion Tire, of which an illustration is presented herewith. In its construction, it consists of three bars, running lengthwise of the tire, the center bar being wider than the sides, and crossbars running at right angles with the longitudinal bars every half inch. It is claimed that this ensures equal distribution of the strain, on account of equal distribution of air pressure; that the bars are placed at the best angles to secure a maximum surface traction that the bars placed in this position support each other and that the surface thus formed does not pick up mud and become slippery in consequence. [Stein Double Cushion Tire Company, Akron, Ohio.]

AN IMPROVED HOSE COUPLING.

The hose coupling or clamp of improved construction, illustrated herewith, can be adjusted instantly to fit various sizes of hose and applied without the use of tools. Neatly made, from stamped brass, with fine threaded steel screw, fitted with brass


SLOT IN BUTTRESS TO ALLOW QUICK ATTACHMENT
WINGNUT FOR MAKING FINAL ADJUSTMENT
T HEAD BOLT SECURES BAND
THESE HOLES ALTER THE LENGTH AND MAKE IT FIT VARIOUS SIZE HOSE

IMPROVED HOSE COUPLING OR CLAMP.

wing-nut, it will not rust fast, but can be instantly released or closed and set up tight without buckling the hose, which is completely encircled by the flat brass band. This feature of fitting any intermediate size of hose within its capacity, is an advantage on which the manufacturer lays particular emphasis. [B. Morgan, Newport, Rhode Island.]

ACCORDING to official statistics the imports of crude rubber during the month of March, 1911, amounted in value to 7.7 million dollars, compared with 8.4 million dollars for the same month in 1910.

CEMENTLESS PATCH FOR PUNCTURED TIRES.

FOR a quick repair to damaged tires or punctured inner tubes, one that entails no waiting for cement to dry and obviates the possibility of the tube being stuck to the inside of the shoe, may be affected with the aid of the Diamond Quick-Acting Cementless Patch, made by the Diamond Rubber Co., Akron, Ohio, and obtainable from any of their distributing depots or from up-to-date dealers in auto supplies.

CEMENTLESS TIRE PATCH.

All that is necessary in applying it is to clean the puncture thoroughly, apply the patch, replace the tire and proceed. The heat the tire generates in running completes the process. Put up in air-tight tins with emery cloth and full directions, the patch sells at one dollar a tin, containing one dozen, and is not only a cleanly and salable addition to the stock of every dealer in auto supplies but should be included in the repair kit carried on every automobile.

NEW STYLES IN RUBBER FOOTWEAR.

NEW styles in rubber footwear, to meet the prevailing modes in men's and women's leather shoes, are illustrated herewith. The first is a woman's "nobby" toe rubber shoe, a new model for this season. It is intended for women's high-heel shoes,

NEW STYLES IN RUBBER FOOTWEAR.

having the "nobby" toe that threatens to become popular this year. The ball of the shoe has a medium swing and the toe is somewhat narrower. It is made in S, M, F, FF or W widths. The latest model in men's military heel, nobby toe rubber shoe is also shown. It is especially made to fit extreme high-heel leather shoes, and has a narrow toe, with a wide ball and small heel seat. This shoe is made in M, F, FF or W widths. [Apsley Rubber Co., Boston, Mass.]

Mexican Rubber Plantation Notes.

By a Special Correspondent.

INTEREST in the possibilities of the cultivation in Mexico of Pará rubber (*Hevea brasiliensis*) continues to be manifested on various sides; and, in addition to the companies previously referred to in these columns as about to undertake experimental plantings of the tree, may be mentioned the Obispo Rubber Plantation Company, of Hacienda San Silverio, near Tuxtepec, State of Oaxaca, the Pennsylvania Obispo Plantation Company, of Plantación La Estancia, and the Playa Vicente Rubber Company, of Hacienda La Escondida, both of these latter being situated in the neighborhood of Playa Vicente, on the Tesechoacán River, State of Veracruz. In this connection it may be noted that the Secretaría de Fomento of the Mexican Government has lately published, for general distribution, a bulletin prepared by the Agricultural Experiment Station at San Juan Bautista, State of Tabasco, on the subject of the culture of the Pará rubber tree, with a view to its encouragement in those parts of the country where the physical conditions would appear to be suitable.

Of the estates above named two are also extending their Castilloa plantings—San Silverio putting out this year 400 acres and La Estancia 250 acres. The former had several thousand acres of rubber under cultivation in 1909, much of which was approaching a tappable age, when, during an abnormal drought in that year, aggravated by a violent south wind, it was almost entirely destroyed by fire, which originated in some adjacent scrub oak land. Notwithstanding every possible effort on the part of the plantation force to arrest the conflagration, within the short space of two hours it had swept over the place, leaving only a few blocks, totalling some 150 acres, untouched. Prompt action in cutting back the charred stumps has probably been the salvation of the plantings, which at first seemed to be hopelessly doomed—90 per cent. of the trees thus treated having since sent up new trunks with strong foliar development. The recovery has been most remarkable, many portions of the burned area now presenting the aspect of healthy new plantings. The younger trees exhibit the better revival, this apparent anomaly being explained by the fact that the lateral root systems of the older and larger trees, being so much nearer the surface of the ground, were the more exposed to the flames, and thus caused the trees to suffer to a correspondingly greater degree. The outlook may now be said to be distinctly encouraging, and there seems every reasonable prospect of the complete restoration of the property to *statu quo* within a period considerably less than could before have been anticipated. The property was transferred on the 1st of May, 1910, to the Obispo Rubber Plantation Company by the Republic Development Company, under a special arrangement contingent upon the loss sustained by the fire.

On La Estancia estate, which is being planted by the Central Development & Contracting Company, of Scottdale, Pennsylvania, the present total area in rubber is 1,050 acres, varying in age between one year and four years. A good stand resulted from last season's planting, which amounted to 205 acres. The soil on this estate is of a somewhat uncommon character. Near the Tesechoracán river, which constitutes one of the boundaries, it contains a large proportion of fine gravel and sand, the former element diminishing as the distance from the river increases until almost entirely replaced by a fine, dark colored sandy loam. Such a gravelly soil may, however, be quite suitable to the growth of Castilloa, for the writer knows of at least one locality in Mexico where a number of big rubber trees—probably twenty years or more old—are thriving in a soil which, to a tested depth of four or five feet, is composed of almost pure gravel. The sub-soil at La Estancia varies slightly in different parts of the estate, but is mainly a sandy clay, which, however, possesses no great density nor any appreciable stickiness, readily crumbling in the hand. The rapid absorption of water in heavy rains testifies to the porous character of this formation, which, in conjunction with the favorable topography of the land, assists in checking surface erosion, losses of organic matter and humus.

Within a short distance of La Estancia, on the road to Playa Vicente, is Hacienda La Escondida, on which there are, in all, about a million rubber trees, while a large area is in pasture for the maintenance of some 1,400 head of cattle. The best of the trees, between five and six years old, were tapped for the first time this year. This tapping was contemplated merely as an experiment, but the initial results proved so satisfactory that it was thought well to continue until the output assumed commercial proportions, a total quantity of about 6,000 lbs. of dry rubber (three parts in slab and five parts in *greña* or scrap) having been obtained up to February. This rubber was prepared by the usual method—coagulating with the juice of the "Jamole" vine (*Ipomœa bona nox*), the simplest of appliances only having been used, as the original intention would not have warranted any great expense in equipment.

Much interest was aroused among rubber planters in Mexico by the recent visit of Mr. Harry S. Smith, of Tobago, for the purpose of investigating the status of Castilloa cultivation in this country in comparison with the same in the British West Indies. Mr. Smith came with a letter of introduction from the Government of Trinidad (of which the island of Tobago is a dependency), and inspected a number of representative plantations in the states of Veracruz, Oaxaca and Chiapas. His itinerary included Guatemala, British Honduras and the west coast of Central America, crossing the Isthmus of Panama on his way home. One of the most interesting matters which he discussed with planters was that of the respective methods in vogue in this country and in Trinidad with regard to the tapping of Castilloa rubber trees. The system adopted in the British West Indies may be briefly explained as follows: The cuts are made with a chisel and mallet, the former tool being 1½ inches wide, with a very thin cutting edge, obtained by means of an extra long bevel. The chisel is held in a slightly upward direction, with the object of making a cut which will tend to throw rain water over the lower edge and aid the wound healing process. The cuts are made about 12 inches apart in a series of vertical lines, spaced about three or four inches from each other, from the base of the tree to a height of about six feet around its whole girth, the successive series of cuts being "staggered." The latex is collected on a calico apron, tied round the bottom of the tree, and so arranged as to form a sort of basin into which the latex may flow. From this receptacle the latex is ladled into enameled-iron cups, and vessels of such material only are used for its storage. It must be confessed that local planters did not wax very enthusiastic over this system—especially when they learned that it demanded the labor of four men to a tree. Admitting the possible superiority of the chisel *incisions* over the ordinary knife *excisions*, on the score of reduced cortical mutilation of the trees, the former clearly involves a more difficult problem in the collection of the latex; and the apron device, above described, by reason of its clumsiness and evident liability to entail loss of latex unless very carefully adjusted to the inequalities of the tree trunk (which, in turn, would mean loss of time), could scarcely be accepted as a satisfactory solution of the same. Not that planters here believe for a moment that they have reached finality in Castilloa tapping; but, Missourians all in this respect, they want to be "shown."

Another matter of perhaps still greater interest brought to the attention of rubber planters in Mexico by Mr. Smith was that of his invention of a centrifugal machine for the treatment of Castilloa latex—designed not only to separate but also to dry the latex at the same time. Various plantations are now anxiously awaiting the advent of this machine upon the market, anticipating by its means a complete revolution in present methods, judging by the samples shown by Mr. Smith.

A careful record kept at La Zacualpa of the yield during the past year of 1,230 planted rubber trees, twenty years old (presumably *Castilloa lactiflua*, to which, according to Mr. Henry Pittier's recently published monograph on the genus "Castilla" (sic), specific rank has now been given), shows that they average 2¼ lb. per tree of dry rubber—and this despite the severe maltreatment which they formerly suffered by *machete* tapping.

A new estate, called Los Tocayos, situated near the several La Zacualpa properties, was opened up last year by the Soconusco Development Company, of San Francisco, California, and the planting made is reported to have been very successful. This season's work on the same estate is to embrace 300 acres. Some 1,600 acres are to be planted on El Rosario estate, near Mapastepec, by the St. Paul Tropical Development Company, of St. Paul, Minnesota, while another concern, located in the district, proposes to put out 650 acres this year on Santa Clara estate.

Advice comes from London on the hearing of a petition in the High Court of Justice for the winding up of the Amistad Rubber Plantations & Estates, Limited, which event may be regarded as the sequel to the difficulty mentioned in connection with this promotion in THE INDIA RUBBER WORLD for January, 1911, page 123.

CASTILLOA IN MEXICO.

IN a report to the board of Agriculture, Trinidad, W. I., Harry S. Smith describes his observations on a visit to Mexico and Central America, made at the instance of that body to investigate the conditions of the *Castilloa* rubber industry in those countries.

From Vera Cruz he proceeded by rail and steam launch to Tuxtepec, which he describes as a "rubber village," with Cas*tilloa* trees growing in every yard, some very old and of great size. Native rubber gatherers pay for the privilege of tapping them. He noted that the trees were of the same variety as those planted in Tobago and records his conviction that the tree cultivated in Mexico is identical with the one grown there.

He visited, in turn, the San Cristobal de Vega, the San Saviaro, the El Palmar, Tezonapa, La Buena Ventura, where he tapped a few 8-year-old trees to obtain a sample for comparison with Tobago rubber; Rubio, with upwards of 2,000,000 trees, the planting of which was started in 1902, on a clearing of over 1,500 acres and several plantations in Chiapas, containing many millions of trees, which, owing to the well-distributed rainfall and suitable soil are described as doing well. He referred also to the thousands of acres of rubber which have been planted on the Isthmus of Tehuantepec under unsuitable conditions and subsequently abandoned.

Visits to the El Rosario estate, a young property, which, at the end of 1911 will have 5,000 acres under rubber, all planted in three years and the planting system of which he fully describes; the Doña Maria, estate at Soconusco, where tapping, which he describes in detail, was in full swing. The coagulation of the latex, accomplished with the aid of the juice of the moon vine, the drying, etc., he also explains.

The last estate he visited was the La Zacualpa group of properties, four in number, with 20,000 acres under cultivation and 6,000,000 trees, the largest block of *Castilloa* in the world. The output of this property, for 1910, exceeded 100,000 pounds and is expected, within three years, to reach 500,000 pounds.

On this estate, the manager, Mr. Fisher, has decided that trees as young as six years old can be tapped to advantage and without injury, provided they have a girth of 15 inches. Such trees are tapped only to a height of six feet, with four or five V cuts each year; as the trees expand, the cuts are carried higher up the trunk, so that at ten years there may be about 20 to 25 cuts, reaching 30 feet up the trees. On this estate, the manager has introduced a system of controlling the collections, which has nearly doubled the amount brought in by the same number of tappers. The method, which may be of interest to some of our readers is described in the report as follows: Each man has a number in the "Mill Book"; his collecting bucket and coagulating tanks have a similar number. At present there are 240 wooden tanks, in groups of six; each man's number corresponds to three of these, so that the latex brought in on Monday goes into one, Tuesday's into a second, and Wednesday's into a third. Monday's latex being coagulated on Wednesday, leaves the first tank ready for Thursday's rubber, each tank is fitted with a tap to draw off the water from the bottom and a glass-covered slit to show when enough water has been drawn off, and each group of six has a jet above for filling the tanks with fresh water. When the rubber is coagulated on the third day, it is lifted out of the tank, and a number tag stuck into it; it is taken to the crêpeing machine, the rubber passes through the rolls, and with its tag goes on to the weighing machine where the amount is noted against the man's number in the "Mill Book."

Under this system, tapping in a 7 to 8-year field, with wild rubber scattered through, 77 men tapped 4,015 trees on one of the days that Mr. Smith was at La Zacualpa, bringing in enough latex to make 528 pounds of dry rubber = 52 trees per man, with an average amount of 6.9 pounds per man. The greatest amount brought in by one man was 9¼ pounds. A man who takes a small boy with him brought in 12 pounds. Tapping 12 days during two weeks, these two brought enough latex to make 189 pounds of dry rubber. On the day that he took his notes 506 pounds passed through the crêpeing rolls, 18 pounds through the centrifugal, and 4 pounds of scrap from the tins, buckets, tanks, etc., making in all 528 pounds, from 4,015 trees = 2.2 ounces per tree. The men have to bring in 5 pounds per day and are paid 3d. for every extra pound. If after a short trial they cannot do this they are put to other employment.

The methods of centrifugalization, of drying, pressing and packing practised on this estate, are also described.

In Guatemala, both wild and cultivated *Castilloa* were observed in traveling from San José to Guatemala City, but it was noted that on reaching an altitude of 1,200 feet, the natural rubber zone was passed.

In Panama, the *Castilloa* trees under cultivation were noted to be different to the variety grown in Mexico, Trinidad and Tobago. The latex does not flow freely in tapping, but oozes out and thickens, necessitating scraping it off, or leaving it to coagulate as scrap. It was learned from a native tapper that the wild trees give a more fluid latex, but that even these do not flow freely.

The report states that when Mr. Smith reached Panama, the Castilloa were in blossom, but that of about 30 trees examined by him only two were found to bear female flowers, a condition that excited his surprise, as in Tobago both male and female flowers appear on the same tree and he had never before seen a Castilloa bearing only male blossoms.

The Castilloa trees seen in Mexico are described as notably free from diseases, not a single case of collar rot, which attacks them in the West Indies, having been observed, while "die back," where not due to the effects of poverty of soil or strong drying winds, proves amenable to treatment.

The yield he describes as about the same in Mexico as in the West Indies.

As a result of his visit to Mexico, Mr. Smith considers the following conclusions as warranted:

(a) That Tobago has the same variety of Castilloa as that cultivated in Mexico, where it has been proved that its culture can be made a commercial success.

(b) That the general conditions, climatic and economic, are equally favorable in the colony.

(c) That from actual experiments, and from information given by planters in Mexico, there is nothing to justify the statements made that ten to twelve year old Castilloa trees yield an average of about 2 pounds per year, but everything shows that the average at this age is near one-half pound per tree.

(d) That by tapping higher up the tree as is done in Mexico the *yield can be considerably increased* and that by adopting some modification of the Mexican methods of tapping and collecting, *the cost of production in Tobago can be reduced materially.*

(e) That the percentage of resin in rubber from trees of similar age is probably the same in both places, but the resin-contents of the average rubber shipped from Mexico would be lower, on account of the number of large wild Castilloas scattered through the plantations, which are tapped at the same time as the young cultivated trees and the latex mixed.

THE PRICE OF PLANTATION "CASTILLOA."

TO THE EDITOR OF THE INDIA RUBBER WORLD: I am well aware that the *Castilloa* rubber is not the equal of fine Pará, but I am of the opinion that we can prepare our plantation rubber in such a way as to insure us a better price than we are now getting in the open market. I should like to be informed for what particular uses the *Castilloa* is best suited, so that I can get in touch with the manufacturers and try to prepare my rubber to suit their particular purpose.

I have 2,000 acres of rubber in first class condition; the latest plantings were made in 1907. Our estimated output for 1911 is 30,000 pounds, and, naturally, our output within the next few years, will be large. I have forwarded various small shipments of fine creamed rubber—very dry, and "blocked"—and have received for the same ordinary scrap rubber prices. No doubt this comes about, to some extent, through ordinary commission procedure, but the fact remains that I see no reason to prepare a first class article as regards dryness and cleanliness, and then accept the price of an ordinary article.

What I very much want to try out is to prepare my rubber as perfectly as possible and ship it to a manufacturer who wants that class of rubber—that is, one who manufactures articles for which *Castilloa* is suitable. If, upon a thorough try-out, we can get no better price than ordinary scrap brings, then we can save time and money by preparing scrap with its corresponding content of dirt and water.

Humanguillo, Tabasco, Mex. A. G. WEISS.

[THERE can be no doubt that *Castilloa* rubber, if clean and dry and not sticky, will always find a ready market, and ultimately, when the carefully prepared product becomes better known, at a price commensurate with its merits. It is scarcely worth while to try to prepare it for any particular line of manufacture, as it goes into an infinite variety of goods. The same applies to the product of other rubber species.—THE EDITOR.]

RUBBER GROWING IN HAWAII.

THE ANNUAL meeting of the Hawaiian Rubber Growers' Association took place recently in the rooms of the Chamber of Commerce, in Honolulu, Hawaii. Delegates were in attendance from all of the rubber plantations in Hawaii, and addresses were given as follows:

"Methods of Tapping," by W. A. Anderson, manager of Nahiku Rubber Company.

"Cultivation and Its Results," by L. F. Turner, manager of Pacific Development Company.

"Pests and Diseases of Rubber Trees in Hawaii," by C. L. Austin, manager of Hawaiian-American Rubber Company.

"Five Years of Rubber Culture in Hawaii," by William Williamson.

Dr. E. V. Wilcox, superintendent of the United States Agricultural Experiment Station in Honolulu, who has made a careful study of the work of the rubber growers in Hawaii, gave a very interesting address on the status of the industry. After commenting on the enterprise displayed by those interested in rubber culture in Hawaii, considering the slight knowledge they possessed of the work, he proceeded, in part, as follows:

"The manner of cultivation of rubber trees is one of the most important things in the industry. I went over all the plantings of all the Nahiku companies last May, and over Puna Plantation, too, and was able to observe very carefully the growth of trees with cultivation and without it. It is a very serious proposition on account of the very rough nature of the land. It simply means promptly getting rid of the weeds and giving the sun a chance to get at the soil. In my opinion, it is not necessary in rubber cultivation to stir the soil very much after the trees have once gotten a start, if you keep the ground clear so that the sun can get at it.

"One of the most striking things to me on looking over all the plantings and comparing them with about a year before, was the great changes that had taken place in the physical appearance of the soil. In some places the soil was mud and the horse went along in the mire. After the weeds were removed the superficial water ran off, and many of those places were actually more or less dry. There was a very noticeable difference, the air was going into the roots and the trees were growing. Now, from the results that have been had so far in growing rubber in Nahiku, it seems to me that we may be sure that a tree large enough for tapping can be got inside of five years. I do not think that unreasonable. Inside of three years we could get them, with the best cultivation, but five years is plenty of time to allow to get a plantation of good size for convenient tapping.

"I think that a reasonable profit can be obtained from the rubber trees as they stand."

Addresses were also given by Prof. Ralph S. Hosmer, Superintendent of Forestry in Hawaii, and E. M. Ehrhorn, entomologist of the Agricultural Department.

The following officers were elected for the ensuing year: C. D. Lufkin, president; William Williamson, vice-president; D. C. Lindsay, secretary and treasurer; B. von Damm and Wade Warren Thayer, directors.

The Hawaiian Rubber Growers' Association is an organization composed of stockholders and directors of the different rubber plantations in Hawaii, whose object is to advance the interests of the rubber industry in the Hawaiian Islands. About 2,500 acres of land is planted in rubber in the Hawaiian Islands at the present time. The oldest plantings were made about six years ago, and the trees of these early plantings are now being tapped, and rubber, in small quantities but of an excellent quality, is being shipped to the Eastern markets. In another year the output will be reckoned in considerable figures, and as all the plantations are adopting the most modern methods of preparing the latex for the market, a very high quality of rubber will be offered from the Hawaiian plantations.

E. Delafond, engineer, is interested in a new factory for the preparation of guayule rubber, established under the title, "La Victoria," F. F. Moncada & Co., at Sierra Hermosa, State of San Luis Potosi. His new process is employed in the factory and the sample of the rubber it produces sent us is of excellent quality.

The Rubber Planting Interest.

THE LONDON ASIATIC RUBBER & PRODUCE COMPANY.

In the third annual report and statement of accounts for 1910, presented by the board of directors of the above company at the annual meeting, held April 27, the rubber crop harvested during 1910 was quoted at 180,477 pounds, against an estimate of 110,000 pounds, and an actual yield, in 1909, of 75,427 pounds. After deducting freight, insurance, landing and all sale charges, the average net price realized for the rubber was just under 6s. 1d. per pound. The cost of production, f. o. b. Port Swettenham, works out at 1s. 4d. per pound against

Seven Year Old Hevea.
(Caledonia Plantation, Wellesley, Straits Settlements.)

1s. 0¾d. per pound in 1909. The increase is attributable to the higher wages paid tapping coolies, large number of trees tapped for first time and consequent expenditure for new tapping tools, increased bonus for Eastern staff and depreciation. The crop of rubber for 1911 is estimated at 371,390 pounds.

To successfully handle the increased crop, new factories are building washing mills and crude oil engines have been dispatched to a number of the states, and are now in course of erection.

The net profit for the year is figured at £43,642, 3s., which with the amount brought forward from last year £5,241 17s. 7d. makes a total of £48,883 17s. 7d.; deducting amount of interim dividend of 10 per cent. paid in October, leaves £33,948 16s. 10d. The directors recommend payment of a final dividend of 15 per cent., leaving £11,448 16s. 10d. to be carried forward.

LUNAVA (CEYLON) TEA AND RUBBER ESTATES, LIMITED.

While tea is avowedly the main crop of this company, the rubber yield is acknowledged to bring a welcome addition to the profits. According to the report presented at the fourth annual meeting held on April 12, the company had 74 acres under cultivation to rubber, and on the various estates 47,172 Parà and 9,608 Ceara trees. The rubber crop last year amounted to 2,398 lbs., the cost of production of which was 2 shillings per pound, while the net price at which it sold was 5s. 9¼d. A final dividend of 6 per cent. was unanimously agreed to.

THE BIKAM (PERAK, F. M. S.) RUBBER ESTATE, LIMITED.

At the first annual general meeting of shareholders, held in London on April 11, the directors presented a report showing 32,657 pounds of rubber collected, for which, after deducting all sale charges, an average net price of 5s. 6.20d. was realized. The monthly output of rubber increased, from 1,266 pounds in June, 1910, to 5,772 pounds in December, 1910. The crop of rubber for the year 1911 is estimated by the manager at 100,000 pounds, against the prospectus estimate of 83,600 pounds. The cost of production, owing to the relatively small quantity of rubber harvested, the great care necessary in tapping new areas, and the fact that the coolies had to be taught to tap, was high,

Oldest Hevea Trees in Malay Peninsula.
(Singapore Botanical Gardens.)

amounting, after adding all expenses, to 2s. 10.13d. per pound. The total area planted is 1,000 acres. The net profit, for the period from November 8, 1909, to December 31, 1910, amounted to £4,391 8s. 1d., from which the directors recommended the payment of a dividend of 8 per cent., which would absorb £3,600.

THE ANGLO-MALAY RUBBER COMPANY, LTD.

The directors' report and statement of accounts of the above company, prepared for presentation at the fifth annual general meeting in London, on May 5, shows a crop of rubber for the year of 673,132 pounds, compared with 577,550 pounds for the preceding year, the average net price produced was 6s. 2d., against 6s. for 1909. The cost of production was, however, somewhat higher, amounting to 1s. 1d. per pound, f. o. b. Port Swettenham, compared with 10⅔d. per pound in 1909. Higher wages paid to tapping coolies, large number of trees tapped for first time, enhanced export duty and increased bonus to staff, are reported as the factors in this higher cost of production. The net profit for the year, with the balance brought forward, amounted to £155,149, from which has been paid three interim dividends, each of 25 per cent. From the amount remaining, £42,649 14s. 1d. the directors recommended the payment of a final dividend of 25 per cent., leaving £5,149 14s. 1d. to be carried forward to next

account. The report describes all the mills and factories as in good condition, and new factories, with complete equipment, in course of erection on two of the estates. The crop for 1911 is estimated at 750,000 pounds, and the tappable area will be about 2,150 acres.

PLANTATION COMPANY NOTES.

The Villa Nova Rubber Estates and Trading Company, Ltd., capital £200,000, organized to acquire and operate the "Sobras da Fazenda, Sao Mauricio" rubber properties, in the State of Bahia, Brazil, offers an issue of £25,000 six per cent. convertible mortgage debentures, of £10 each. The proceeds, after payment of preliminary expenses, will be employed as working capital and for the general progress of the company.

Anglo-Java Rubber and Produce Co., Ltd., owning and operating several producing rubber estates in Java, recently announced an issue, at par, of £85,000 seven per cent. first mortgage convertible debentures, part of an authorized issue of £100,000 like securities, in debentures of £50, £100 and £500. The proceeds were to be used in taking up debentures already on the market.

Harrisons & Crosfield, Ltd., held a meeting on April 25 to sanction the creation and issue of a further £200,000, 5½ per cent. cumulative preference shares of £1 each to enable the directors to take advantage of exceptional opportunities offered to them of still further extending the business of the company.

RUBBER PLANTING INTERESTS.

The Vallambrosa Rubber Co., Limited, Edinburgh, Scotland, report the amount of rubber harvested for the twelve months ending March 31, 1911, at 411,300 pounds, compared with 371,306 pounds for the same period last year.

The Sungei Liang Rubber Co., Limited, with an issued capital of £33,000 out of a nominal capital of £70,000, has recently issued £25,000, 7 per cent. first mortgage debenture stock, which was offered to the shareholders of record at par, in the proportion of £2 stock for every three shares held.

Bambrakelly (Ceylon) Tea and Rubber Co. announce the declaration of an interim dividend of 2 per cent., payable March 18, on shares ranking as fully paid for the whole of the financial year.

RUBBER EXPORTS FROM THE FEDERATED MALAY STATES.

According to published statistics, the exports of rubber from the Federated Malay States, during 1910, were more than double those of the preceding year and three and one half times as great as from Ceylon. The official totals are as follows: Rubber exports from Federated Malay States in 1910, 12,213,526 pounds, compared with 6,008,815 pounds in 1909. Taking the increase by states, Perak made 162 per cent.; Selangor, 95 per cent.; Negri Sembilan, 64 per cent. and Pahang, 8,944 per cent. increases, as compared with last year's output. Pahang produced 5,929 pounds in 1910, compared with 66 pounds in 1909.

RUBBER PLANTATION CORPORATIONS.

Following are the names of companies recently organized to engage in the rubber-planting business that have been registered by the London Stock Exchange:

Bukit Tambun Coconut Co., Limited; capital, $75,000; to acquire plantations in the District of Juroo, Province Wellesley, Federated Malay States, for the cultivation of rubber, coconuts, and other produce.

Yatadeira Rubber and Tea Co. (March 3); capital, £150,000; to take over the business of Ceylon planters, estate owners, merchants and manufacturers, carried on by the Yatadeira Tea Company of Ceylon, Limited. First directors: R. A. Cameron, L. B. Wyse, R. H. Eliot and T. G. Hayes.

Tirucalli Rubber Concessions (March 4); capital, £35,000. Planters of and dealers in rubber, jelutong and other gums, etc. To acquire property in Natal or elsewhere. First directors: Sir James Heath, Bart., D. H. Macpherson, H. Noyes and Sir T. Salter Pyne.

Selangor United Rubber Estates (March 6); capital, £90,000. To acquire any concessions, grants, decrees, rights, etc., in the Straits Settlements, Federated Malay States or elsewhere and to adopt an agreement with the Ernesti Syndicate, Limited.

Culloden Tea and Rubber Investment Co. (March 6); capital, £250,000. To adopt an agreement with J. D. Fletcher. First directors: J. D. Fletcher, A. A. Baumann and E. B. N. Mackenzie.

Deltota (Ceylon) Tea and Rubber Plantations; capital, £40,000. Agreement with Tea Plantations Investment Syndicate, Limited. First directors: Sir William W. Mitchell, J. E. McCabe, T. B. Smith and E. R. Wiggin.

Ulu Pari Rubber Estates; capital, £55,000. To acquire certain lands, known as the Ulu Pari Estates, Perak, Federated Malay States and to adopt an agreement with the Pari Syndicate, Limited. First directors: Sir John Furley, W. H. Wilson and R. M. Conolly.

Werompi (Ashanti) Rubber and Gold Concessions (March 13), capital £250,000. Gold and general miners, growers of rubber and other crops. To acquire 100 square miles of concessions in the southern district of Ashanti, West Africa, and to adopt an agreement with the British West Africa Traders, Limited. First directors: W. O'Malley, M. P., A. Higginson and Sir Broderick C. D. A. Hartwell.

Rotterdam-Deli Hevea (March 15). To acquire, from the Rotterdam-Deli Maatschappy, an estate at Bahilang, on the East coast of Sumatra, consisting of about 4,487 acres, for the cultivation of *Hevea Brasiliensis* rubber, and to adopt an agreement with the Globe Trust, Limited. First directors: Sir William B. Hudson, H. A. Van Nievelt, W. Norfolk, C. W. Skinner and O. F. Weise.

Deltota (Ceylon) Tea and Rubber Plantations, Limited, capital £40,000, to acquire the "Bowlana" and "Ooloowatte" estates, near Deltota, in the Lower Hewaheta district of Ceylon. On Ooloowatte, are 78 acres of Ceara, 15,000 trees being reported in 1909 as tappable. The rubber acreage is to be greatly extended.

Selangor United Rubber Estates, Limited capital £90,000. To acquire and work the New Comet, Brownwilie and St. Andrew Estates, in the State of Selangor, Federated Malay States. The estates comprise 1,704 acres, mostly planted with Hevea brasiliensis, altogether 111,370 trees, the total appraised value of the property being £47,000.

Nyong Rubber Plantations, capital £150,000. To acquire the rubber plantations of Delane on the right bank of the Nyong river, in the colony of Camerun. In May, 1910, there were on the estate 529,000 rubber trees and more have since been planted.

Mooply Valley Rubber Company, capital £25,000. Rubber and general produce planters and merchants, and to acquire certain interests in the Palapilly and Mooply Valley estates, in Southern India. First directors: J. Fraser, H. Smail, T. C. Forbes and K. E. Nicoll.

Kombok Rubber Company (March 23), capital £100,000. To take over the Kombok Estate, district of Seremban, Negri Sembilan, Fed. Malay States. First directors: R. W. Giblin, J. Anderson and C. M. Cumming.

New Kali Selogiri (Java) Plantations, capital £70,000, formed to take over the Kali Selogori Estate of about 2,087 acres, on the northeast slope of the Merapi Mountain, sub-district of Suigatornau, district of Banjoewanji, Residency of Besoki, South East Java, mostly planted with *Hevea* rubber, with some Rambong rubber and some interplanted cocoa and coffee. Of the total 70,000 £1 shares, 20,000 were to be issued as fully paid, in part payment of the purchase consideration.

Lowland Rubber Estates (Ceylon), Limited, capital £50,000, formed to acquire and operate a property of about 1,279 acres, being part of Molesworth Brothers Rubber Estates, in the lowlands of Ceylon, on the Mahaveli River. The company expect to have 200,000 Ceara trees ready for tapping, end of 1914.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

WHILE there are still complaints of depression in some lines of business, improvement is confidently looked for along all lines and has already reached manufacturers of mechanical goods, tires and druggists' sundries. The general feeling is that a prosperous time for the Pacific Coast is coming.

* * *

While making his tour of the State, General Manager F. A. Sieberling, of the Goodyear Tire and Rubber Co., who has been spending several months in the southern part of the State, passed a few weeks in San Francisco. From here he returned to Akron.

* * *

The B. F. Goodrich Co. of Akron has registered to do business in California under the laws of the State, with a declared capital of $10,000. H. C. Miller, C. B. Raymond and W. P. Smith, each holding one share, qualified as incorporators. The company's business has been unusually good during the month. Mr. Cook, of the company's staff, has left for a visit to Akron.

* * *

Now that the Japanese have started in to equip their jinrickishas with rubber tires, there is likely to be a big demand for tires from that country, as the Japanese, though they have tried to make them at home, find that they cannot produce tires having the wearing qualities of those made in the United States, Diamond Rubber Company has just shipped them 4,000 pounds of "ricksha" tires.

* * *

The Powers Rubber Works of this city will substitute electricity for steam power in its Bay Point factory and will take 500 h. p. from the Great Western Power Company.

* * *

Walter Titcomb, formerly with the Pacific Coast Rubber Co., of this city, has associated himself with the Plant Rubber and Supply Co., San Francisco, who have secured in him the assistance of one of the oldest mechanical rubber goods men on the coast.

* * *

The United States Rubber Co. takes over the business of the Pacific Coast Rubber Co., in Oregon and the three stores of the Washington Rubber Co., in Washington. The purchase was made in accordance with their policy to cover the coast through the Gorham-Revere Rubber Co., recently organized. In Portland, Ore., the branch stores of the former Gorham Rubber Co. and of the Pacific Coast Rubber Co. have been merged and the name changed to the Gorham-Revere Company, with F. S. Winslow, formerly manager of the Pacific Coast Rubber Co., in charge. The Gorham Co. branch and the Washington Rubber Company branch at Seattle are also consolidated, with Arthur J. Hamlin, of the Gorham branch, as manager. The stores in Spokane and Tacoma, Washington, while still retaining the name of the Washington Rubber Company, will be under the supervision of the Gorham-Revere Rubber Co. Mr. Thompson has been given the management of the Spokane store, vice Mr. Biddinger resigned. Otto Richter will continue as manager of the Tacoma store. W. J. Gorham, San Francisco, is now in the northern cities, looking after the details of the various changes which have taken place.

* * *

After being on the sick list for the past three weeks, A. H. Gregory, manager of the San Francisco branch of the New York Belting and Packing Co., is again in harness. W. L. Eaton, also with this company, is absent on a trip to Portland.

The Phœnix Rubber Co. and the Republic Rubber Co. are moving into their new offices at 604 Van Ness avenue.

The Central American Rubber Co. has been incorporated at Spokane and the Western Tire Co. at Seattle, Wash.

E. H. Parish and J. Brendan, of the Gorham-Revere Rubber Co., which has a branch at Osaka, Japan, are now making a trip to that country.

During the past month there has been an unusually large demand for rubber boots for the Alaskan trade, some of the local firms being completely sold out.

After serving, for a time, as chief accountant for the former Revere Rubber Co.'s branch store, H. E. Crocker has returned to the factory to assume a similar position.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

ALTHOUGH the tire departments of all the Akron rubber factories have been running full force, the backward spring has affected the tire business in Ohio. The country roads are in worse condition than they have been for many years and the Good Roads movement has been given a corresponding impetus. But dealers' shelves are still loaded with tires, although the advent of fine weather will be followed by a rush that will speedily deplete the stocks and then, those dealers who have been tardy in placing orders, will have to wait for a supply. There has been a heavy demand for bicycle tires in all the factories.

* * *

Evidence of the popularity of the No-Rim-Cut tire, manufactured by the Goodyear Tire and Rubber Co., is furnished by their establishment, within the past six months, of fourteen new branches in various parts of the States. The demand for these tires trebled during 1910, and the prospects are that the business will be even larger during the current year. The company's Cleveland branch has been removed to 1733 Euclid avenue, and its Chicago branch to 177-179 N. Michigan avenue.

The motorcycle record, made by Jake De Rosier at Los Angeles, California, of 84 miles in an hour, is said to have been made possible by his use of Goodyear "blue-streak" motorcycle tires.

* * *

Several lines of waterproof garments, including waterproof coats, ponchos, capes, slickers, etc., which have been approved for use by the United States army, have been placed on the market by the Federal Water Proofing Co.; this department of their business is growing rapidly.

* * *

The Rubber Goods Supply and Manufacturing Co., of Akron, was incorporated under the laws of Ohio on April 7, with a capital of $10,000. The principal incorporators are Clinton Falor, C. Forest Falor and E. H. Trump. The company is composed of a number of experienced rubber men who expect to commence the manufacture of rubber goods on a small scale immediately and have bought a small building in South Akron for this purpose.

* * *

The Miller Rubber Co. is adding another story to one of its buildings, 60 x 100 feet. The additional story will be used for tire manufacturing.

* * *

Invited by the Diamond Rubber Co., a party of over 100 stationery engineers visited their plant on April 4 to inspect their new turbine engine, erected for them, as a supplementary engine, by the Allis-Chalmers Co. The latter company's salesman, Mr. Wolf, delivered a "talk" on the turbine engine and the visiting engineers were entertained at a social and smoker by the Diamond Company.

O. C. Barber, a director and one of the founders of the company, was recently entertained at the Country Club at a dinner given to commemorate his seventieth birthday. W. A. Johnson, president of the Rubber Products Co., of Barberton, was one of the principal speakers and complimented Mr. Barber on his successful work in building up the Diamond Rubber Co., the

Diamond Match Co. and other important industries of Akron and vicinity, and congratulated him on his hale and hearty condition.

The company's boot and shoe department is growing rapidly, and in the waterproofing department additional machinery is being installed. The advertising department has moved into its new and commodious quarters in the west wing addition to the main office building. A new south wing is being built on the new office, to be used by the offices of the mechanical goods department.

The growth of the company's business may be gathered from the fact that since January 1, of the current year, twenty-four new Diamond branches or service stations have been established in various parts of the country.

The company have moved into their new and completely equipped quarters at the corner of Spring Garden and Broad streets, where they will have offices, blacksmith shop, repair shop, sales rooms and storage rooms and a complete branch store.

H. J. Lee has resigned as manager of the company's branch at Atlanta, Georgia, and J. F. Lanier has been placed in charge.

The Diamond Rubber Co. has been awarded the contract, amounting to $75,000, for the insulated wire, to be used in the new Municipal Building in New York City.

* * *

The manager of the New York branch of The Swinehart Tire and Rubber Co., which was recently removed from 875 Seventh avenue to 1924 Broadway, is E. O. Hoopenjeimer, a former Akron man.

* * *

The Prudential Rubber Co. has been incorporated with a capital stock of $10,000 under the laws of Ohio. The incorporators are Frank E. Millhoff, G. B. Motz, Ed. A. Millhoff, W. E. Young and H. E. Andress. They are reported as about to start a general merchandizing business and may ultimately engage in the manufacture of tires.

* * *

The Stein Double Cushion Tire and Rubber Co. is reported as having increased its tire output this spring by at least 60 per cent.

* * *

The Consolidated Rubber Tire Co. is opening a branch at 1846 Euclid avenue, Cleveland, Ohio, of which P. D. Beech, formerly one of the company's traveling salesmen, has been given charge . They have also opened a new branch in Baltimore, Maryland, at 404 Orchard street.

* * *

The Star Rubber Co. has opened a new service station for tires with the Buick-Scott Co., 31 Woodland avenue, Detroit, Michigan.

* * *

The B. F. Goodrich Co. are remodeling their new office building on Broad street, Philadelphia, which is located near the Diamond Rubber Co.'s branch in that city.

* * *

R. J. Firestone, sales manager of the Firestone Tire and Rubber Co., has recently completed an extended tour of the Western and Pacific Coast branches of that company.

* * *

Buckeye Rubber Co., now running night and day, expect this summer to double their tire capacity. At present the factory is thirty days behind orders. The shipping and receiving rooms will be extended by the addition of a second story, for which plans have been prepared and bids received, and plans have also been completed for a four-story building, 60 x 82 feet, which will be adjacent to the present curing department and will be used for tire building. The completion of both buildings is expected this summer. The company's general manager, F. E. Holcomb, recently spent a few days in Michigan.

The American Tire and Rubber Co., having completed their organization and purchased property, are installing rubber machinery and expect to begin manufacturing within sixty days. Incorporated with a capital stock of $200,000, the company is under the direct management of thoroughly experienced rubber manufacturers, the superintendent, W. J. Yeager, having been ten years with the Diamond Rubber Co., two years with the India Rubber Co., four years with the Goodyear Rubber Co. as assistant superintendent, and nine years with the Stein Tire and Rubber Co. as superintendent. The secretary, F. L. Kryder, was formerly connected with The Peoria Rubber Co., Peoria, Illinois. The property purchased by the company was formerly owned by the Aetna Mills and is located on Beech street, with convenient railroad facilities, hydraulic power and cheap transportation by way of the Ohio Canal. They expect to begin by manufacturing solid and pneumatic carriage and automobile tires and inner tubes, and later a puncture proof automobile tire with a resilient elastic filler and a general line of mechanical goods. The company expects ultimately to reclaim their own rubber and to manufacture and place an improved rim for solid and pneumatic tires on the market. The company claims to have an improved process for reclaiming rubber and expects to start with a capacity of 300 tires per day.

THE RUBBER TRADE IN CINCINNATI.

BY A RESIDENT CORRESPONDENT.

THE United States Tire Co. is the latest company to join the local rubber colony. The company has just completed negotiations whereby it has secured a ten-year lease on a building at 120 and 122 East Eighth street, the total rental involved for the period being $25,000. The building will be ready for occupancy July 1, and will be one of the most modern and complete in this State. The company has heretofore been represented by dealers, but business has grown to such an extent that it is necessary to operate a branch house in this city. The location secured is in the automobile salesroom district of the city, which gives the company a decided advantage. The agencies of the Michelin Tire Co., G & J Tire Co., and Morgan & Wright will be consolidated and operated from the new branch.

* * *

Frederick T. Luth, who has been connected with local automobile tire branches, has become associated with the Cincinnati branch of The Diamond Rubber Co.

* * *

According to reports submitted to the board of directors of the Cincinnati Rubber Manufacturing Co. at their annual meeting, the company has enjoyed a prosperous year and business in all departments has been exceedingly good. The directors declared the first dividend at the rate of 4 per cent. which was paid stockholders on April 15.

* * *

The Schaefer Rubber Co., operating a retail rubber store, one of the largest of its kind in the Middle West, dealing in rubber sundries, rubber shoes and rubber clothing is expanding its business and has opened a similar store in Detroit, Mich. The new branch is in charge of George Schaefer, son of the president of the company.

* * *

G. A. Eisman has been appointed local representative of The B. F. Goodrich Co. Mr. Eisman will cover southern Ohio, Kentucky, Indiana and Tennessee, with headquarters in this city.

* * *

The Atlas Rubber and Belting Co., No. 212 Main street, has been appointed distributing agents for the mechanical goods of The B. F. Goodrich Co. This firm will have charge of the territory of southern Ohio, Tennessee, Kentucky and Indiana, the same territory covered by the Cincinnati branch of that company.

News of the American Rubber Trade.

A CHICAGO FIRM'S RAPID PROGRESS.

E. F. NORTON & Co., Chicago, dealers in scrap rubber, announce their removal into new quarters, southwest corner of Orleans and Ontario streets, that city, where they will occupy the entire building, of four stories and basement, of which an illustration is given herewith.

The firm started, on a very modest scale, in the latter part of November, 1909, but did not actually engage in the scrap rubber business until January, 1910, when they occupied a suite of offices at 145 La Salle street. The rapid growth of their business compelled them to remove, in March of that year, to

THEIR NEW BUILDING.

their present quarters on South Canal street, and the business continuing to increase, they had to rent an additional warehouse on Canal street. It was not long, however, before these quarters too were outgrown, and they eventually secured the building they will now occupy.

With light on three sides and containing approximately fifty thousand feet of floor space, with a private switch track from the Chicago, Milwaukee & St. Paul Railroad on the premises, and two electric elevators, the handling of receipts and shipments will be greatly facilitated in their new quarters, and they will be able to take care of carload lots, with the least possible labor. The excellent light will also facilitate the work of assorting and the number of baling presses used will also be increased, enabling the firm to conveniently handle the largest volume of business, with which their patrons, a continuation of whose favors they solicit, may entrust them.

CANADIAN GENERAL ELECTRIC CO., ANNUAL REPORT.

THE annual report of the directors of the Canadian General Electric Co., submitted to the general meeting held recently in Toronto, shows gross profits for the year ending December 31, 1910, exceeding those of the preceding year by nearly 50 per cent. After setting aside $188,087 for depreciation and $76,820.68 for interest, there remained the sum of $646,300.08. After deducting $494,624.83 for dividends on preferred and common stock, there was a balance of $157,675.25 to carry to the credit of profit and loss. Added to the balance already existing, this makes $311,143.31 in this account, which, with the reserve fund of $1,669,531.95, makes the total surplus $1,980,675.26. Both as to volume and price, the past year's business was reported as having been satisfactory and unfinished business to the value of $4,000,000, on which no profit has been taken into account, is carried forward to next year.

During the year important improvements on the company's plant have been made, including a large addition to the machine shop at the Peterborough works. In order to increase the capacity of the structural steel department, the lands and plant of the Canadian Shipbuilding Co., near Bridgeburg, Ont., have been leased on terms that make them the company's property in twenty years.

UNITED STATES RUBBER COMPANY DIVIDENDS.

At the annual meeting of the above company, held in New York on April 6, the usual quarterly dividends of 2 per cent. on first preferred and 1½ per cent. on second preferred shares to stockholders of record April 14, was declared payable, without closing of the transfer books, on April 29, 1911. No action on the payment of a dividend on the common stock was taken prior to the adjournment of the meeting subject to the call of the chair. The annual meeting of the stockholders of the company will be held May 16, 1911, at New Brunswick, New Jersey.

CANFIELD RUBBER COMPANY.

THE Canfield Rubber Company, Bridgeport, Conn., are erecting an addition to their plant in that city, in the shape of a two-story brick building 36 x 140 feet. It will be used for office purposes and for the accommodation of their knitting and winding departments, which have been overcrowded owing to the steady increase in the company's business.

NEW BOSTON MANAGER FOR U. S. TIRE CO.

E. H. KIDDER, who succeeds Mr. Langmaid as manager of the Boston branch of the United States Tire Co., is well known in automobile trade circles, in connection with tire interests. A few years ago, he represented one of the big tire concerns on the Glidden tour, and soon afterwards became Boston manager for the Continental Tire Company, the business of which he was instrumental in increasing greatly. When the United States Tire Company was formed he was given charge of its solid tire department, and his promotion to the management of the Boston branch is the outcome of his assiduity and success in that position.

TRADE NEWS NOTES.

THE dividend paid by the General Rubber Co., on March 20, amounted to 10 per cent., not 20 per cent. as was made to appear through a typographical error, in the April 1 number.

The Goodyear Tire and Rubber Co., Akron, Ohio, have removed their Chicago branch office to Nos. 177 and 179 North Michigan avenue.

An idea of the magnitude of the rubber tire business in the United States is afforded by the records of the shipping department of one of the big concerns. During the month of March there were shipped from the factories of the Diamond Rubber Company, Akron, Ohio, 100,000, all but a baker's dozen, of automobile tire casings. This means four and a half freight cars loaded with tires despatched every working day, and had they been shipped simultaneously it would have required more than a hundred cars, made up into two trains to transport them.

The Gutta Percha and Rubber Manufacturing Company, New York, manufacturers of mechanical rubber goods, have removed their San Francisco office to 34 Fremont street. They also announce the removal of their Chicago store to 301 West Randolph street, corner of Franklin.

Revere Rubber Co., Chelsea, Massachusetts, manufacturers of mechanical rubber goods, have removed their Chicago branch from 168 Lake street to 158 West Lake street.

UNITED STATES TIRE CO.'S SELLING ORGANIZATION.

To systematize and facilitate their business, the United States Tire Company, formed to handle the output of the Continental, the G & J, Hartford and Morgan & Wright concerns, has recently reorganized its sales force, at the head of which has been placed J. D. Anderson, formerly general manager of the Hartford Rubber Works Co., as sales manager. The country has been divided into three sections, for the better control of selling operations: The Eastern Division with head offices in New York, will be managed by O. S. Tweedy, formerly sales manager of the Continental Caoutchouc Co.; the head office of the Central Division, with A. I. Philp, formerly vice-president and sales manager for Morgan & Wright at its head, will be in Chicago, and at San Francisco, under the management of Joseph Weston, former secretary of Morgan & Wright, will be the main offices of the Western District. A recent order for 50,000 tires, from the United States Motor Company, for the equipment of Columbia, Maxwell, Brush and Stoddard-Dayton cars, was a record order for the company's sales department.

DIAMOND RUBBER CO.'S EXPANSION.

The Diamond Rubber Co., Akron, O., have opened a branch at San Diego, Cal., to enable them the better to take care of their rapidly increasing business in the extreme southern portion of that State. The new branch is located at No. 1260 Fourth street and W. A. Tondro is in charge. The company has also opened a new branch at Salt Lake City, Utah, of which E. L. Hiteman is manager. At Fresno, Cal., in the Masonic Temple building, K and Merced streets, a Diamond Rubber Company office has been opened and arrangements have been made to open new branches in Oakland and Sacramento, Cal., and Spokane, Wash. This will make fifty-four direct Diamond Rubber Co. offices distributed throughout North America.

OXFORD RUBBER COMPANY.

ORGANIZED to continue the business formerly carried on under the same title, by a co-partnership, the Oxford Rubber Company, Cambridge, Mass., occupy five buildings on Main street, running through to State street, in that city, the aggregate floor space being 25,000 feet. Three of the buildings are equipped for proofing light and heavy materials, and in one, a four-story structure, they manufacture rubber clothing, to which they propose to add the productiton of proofed cloth for the cutting up trade. The officers of the company, which is doing a good volume of business, are as follows: Isaac MacPherson, president; George B. Robeson, vice-president and secretary, and Warren MacPherson, treasurer.

PERSONAL MENTION.

WARREN M. SALISBURY, head of the firm of W. H. Salisbury & Co., Chicago, dealers in rubber goods, has built and will occupy next month, a beautiful villa on the shores of Ononta Lake, near Pittsfield, Mass. It follows the old English style of Robert Adam, and will be named Tor Court.

William A. Johnstone, of the Rubber Products Co., has presented the "Augusta" apartments, on Scoville avenue, Cleveland, to the Salvation Army as a house for working girls, to be opened by May 1. The buildings are valued at $47,000.

Frank E. Blanchard has been appointed assistant sales manager of the Firestone Tire and Rubber Co., and will make his headquarters at the factory, in Akron, Ohio. Mr. Blanchard leaves The Whitman & Barnes Manufacturing Co., of which he has been general manager for 16 years, previously having had charge of their rubber tire trade.

A. A. Cushman, formerly superintendent of the National India Rubber Company, Bristol, R. I., is no longer connected with that corporation.

"The Rubber Country of the Amazon," by Henry C. Pearson, is an interesting story of india-rubber, the people who produce it and the country where most of it is produced.

HOW THE GOODYEAR TIRE AND RUBBER CO. IS GROWING.

The establishment, within the past six months, of fourteen new branches, indicates the progress the Goodyear Tire and Rubber Co. (Akron, Ohio), is making. This they attribute largely to the popularity of their "No-Rim Cut" tire, the sales of which doubled during 1910. The company now has branches in one hundred and twenty cities in the United States and Canada, those recently opened being in Columbus, O., Dallas, Tex., Des Moines, Ia., Forth Worth, Tex., Indianapolis, Ind., Jacksonville, Fla., Memphis, Tenn., and Oklahoma City, Okla. The company have also recently opened a depot, store and repair department at 1733-35 Euclid avenue, Cleveland, O.

AMERICAN RUBBER MANUFACTURING CO.

THE AMERICAN RUBBER MANUFACTURING CO., with offices in San Francisco and factory at Emeryville, California, who have recently made a two-story addition to their plant, 40 x 80 feet, for the accommodation of their cotton hose looms, send us copies of their newly issued price list. The company manufacture belting, rubber and cotton and cotton rubber lined hose, packing, mats and matting, tubing, valves, rubber covered rolls, springs, and a full line of molded and mechanical goods, which they describe in their price list, a neatly printed 16-page publication in which they quote prices.

TRADE NEWS NOTES.

Jenkins Bros., manufacturers of the line of valves bearing their name, and of the well-known Jenkins packings, announce their removal from John street, where they have been located for upwards of thirty years, to quarters better adapted to the requirements of their increasing business at 80 White street, New York.

The National India Rubber Company, Bristol, R. I., as lowest bidders, have been awarded a contract for supplying the United States government with submarine telephone cables, for use at Newport, R. I.

The Standard Rubber & Cable Co., Bridgeport, Conn., announce that Mr. W. J. Burns has resigned as president of the company and is no longer connected with it in an official capacity. The company, which manufactures tires, special moulded work and insulated wire, is preparing to increase its factory space and producing capacity and reports prospects good for a material growth.

The Swinehart Tire & Rubber Co., Akron, Ohio, have removed their New York branch to No. 1924 Broadway. Here their solid, pneumatic and internal wire tire departments are now housed with other departments; friends and customers are invited to visit them in their new quarters.

The Firestone Tire & Rubber Co., Akron, Ohio, are elated at the showing made by their Firestone tires at the racing meet for 1911, at Bablo Beach, Fla. Their durability was a factor in some of the most notable victories, many of them won without changing a tire, and they were used on many of the most famous racing cars at the meet.

The Walpole Rubber Company and Massachusetts Chemical Co., New York and Walpole, Mass, manufacturing rubber goods, druggists sundries, friction and rubber tapes, varnishes, paints and compounds, rubber flux, moulded rubber and rubber and electrical insulation, announce the removal of their New York offices, to more commodious and conveniently located quarters, at 80 to 82 Reade street.

The Fisk Rubber Company, Chicopee Falls, Massachusetts, have been awarded the contract for equipping the apparatus of the New York City fire department with pneumatic tires. The award followed an exhaustive test of the wearing qualities of tires. The entire outfit of the fire department of Springfield, Massachusetts, including, in addition to the automobiles used by the chiefs, the engines, ladder trucks and hose wagons has been using Fisk pneumatic tires for several months and they have given excellent satisfaction.

NEW INCORPORATIONS.

AMERICAN Rubber and Fabric Co., March 20, 1911, under the laws of Delaware; authorized capital, $1,500,000. Incorporators: Robert L. Van Dusen, Herbert N. Combs—both of Philadelphia, Pennsylvania, and Francis H. Hoffecker, Wilmington, Delaware. The company has been incorporated to buy and sell rubber and own rubber plantations in any part of the world.

Anglo Tire Co., March 27, 1911, under the laws of New York; authorized capital, $5,000. Incorporators: Maurice Sanders (president), Jennie Sanders and Joseph Sanders—all of New York city. Location of principal office: No. 1612 Broadway, New York.

British-American Rubber Clothing Manufacturing Co., March 20, 1911, under the laws of New York; authorized capital $30,000. Incorporators: G. A. Blasi, V. Maronna—both of Brooklyn, New York, and Joseph Vergara, New York City. To manufacture rubberized clothing. Location of principal office: Brooklyn, New York.

Co-operative Rubber Co., April 7, 1911, under the laws of New York; authorized capital, $500,000. Incorporators: A. C. Smith, Lynbrook, Long Island; Charles P. Butler, Jersey City, New Jersey; and M. F. Lynch, Brooklyn, New York. To manufacture rubber goods. Location of principal office: East Setauket, New York.

Crist Rubber Co., March 4, 1911, under the laws of New York; authorized capital $10,000. Incorporators: George B. Crist, Charles P. Jones—both of Utica, New York, and George H. Burgess, Cassville, New York.

Davenport Leatherware Co., April 20, 1911, under the laws of New York; authorized capital, $200,000. Incorporators: Joseph J. Coyne, Philadelphia, Pennsylvania; Lionel C. Scheuer and Max Frank—both of New York City. To manufacture leather and rubber goods. Location of principal office; New York City.

De Luxe Rubber Co., March 31, 1911, under the laws of New Jersey; authorized capital, $25,000. Incorporators: William Cox, Jr., John S. Cox, George J. Reuter and Leslie R. Pratt—all of Jersey City, New Jersey. To manufacture, purchase, sell and repair automobile tubes and tires and all goods of which rubber is a component part.

Featheredge Rubber Co., March 31, 1911, under the laws of Illinois; capital, $20,000. Incorporators: Benjamin B. Felix (president and treasurer), William Brown, Jr., and William Sherman Hay (secretary). B. F. Felix is vice-president of the company. Location of the principal office: No. 414 West Indiana street, Chicago, Illinois. To take over the business of The N. Tire Rubber Sponge Co.

D. C. Hall, Incorporated, March 24, 1911, under the laws of Connecticut; authorized capital, $20,000. Incorporators: Jewett C. Hall, Julia N. Hall—both of Norwalk, Connecticut, and James A. Donohue, Jersey City, New Jersey.

Hercules Tire and Rubber Co., March 23, 1911, under the laws of Delaware; authorized capital, $100,000. Incorporators: E. G. Bossinger, Joseph T. Murray and F. L. Cleveland—all of Pittsburg, Pennsylvania.

Theodore Hofeller & Co., March 9, 1911, under the laws of New York; capital, $200,000. Incorporators: Theodore Hofeller, Eugene D. Hofeller and Mirza D. Short—all of Buffalo, New York.

Hudson Rubber Co., April 7, 1911, under the laws of New York; authorized capital, $5,000. Incorporators: William Jude, Henry Jude—both of New York City, and Turner J. Oakley, Wakefield, New York. Location of principal office: New York.

Maguire Rubber Co., April 15, 1911, under the laws of New York; authorized capital, $25,000. Incorporators: Hugh C. Murray, C. Monteith Gelfini and James M. Wright—all of No. 68 William street, New York City.

Overland Tire Co., March 10, 1911, under the laws of Illinois; capital, $5,000. Incorporators: George S. Pines, Asher J. Goldfine and Edward R. Newman. Norman L. Steinberg, a thoroughly capable tire-man, is president of the new company which has moved into new quarters at 1409 Michigan avenue, Chicago, Illinois, where they are doing a good business. Their line includes casings, tires and some tire acccessories and they promise to specialize a high-grade tire at low prices.

Peerless Tire Filler Co., March 24, 1911, under the laws of Delaware; authorized capital, $100,000. Incorporators: W. F. P. Lofland, W. I. N. Lofland, and John S. Collins, Jr.—all of Dover, Delaware. To deal in automobile and motorcycle tires and tire fillers.

Prudential Rubber Co., April 4, 1911, under the laws of Ohio; authorized capital, $10,000. Incorporators: Frank C. Millhoff, Edward A. Millhoff, C. B. Motz, W. E. Young, and H. E. Anderson. To deal in rubber tires, and all goods in which rubber is a component part.

Regal Specialty Co., April 17, 1911, under the laws of New York; authorized capital, $10,000. Incorporators: James A. Ryan, Theresa Marsielje and Delbert E. Marsielje—all of Rochester, New York. To manufacture rubber goods. Location of principal office: Rochester, New York.

The Rubber Manufacturing Co., April 1, 1911, under the laws of New York; authorized capital $10,000. Incorporators: Harry H. Honigbaum, William S. Honigbaum, and Berthan Jackson, all of New York City. To manufacture rubber proofing material, etc. Location of principal office: New York.

GUAYULE AT THE RUBBER EXHIBITION.

The Continental Rubber Company of New York, will have an interesting exhibit at the forthcoming International Rubber Exhibition, which will open in London in June. Their display will include, in addition to a full line of samples of their guayule rubber, a miniature rubber plant in operation, with the aid of which capable demonstrators will show to those interested, the methods of compounding and vulcanizing various grades of rubber goods made from guayule rubber.

TRADE NEWS NOTES.

The Thermoid Rubber Co., Trenton, N. J., have opened branch offices in the Perin building, 5th and Race streets, Cincinnati, O., where they will carry a full line of the Thermoid automobile goods.

Having withdrawn from the firm of Theodore Hofeller & Co., Buffalo, N. Y., Julius Hofeller has formed a new company in that city, to deal in scrap rubber, rags and paper stock. The new company, which has its offices at 836 Chamber of Commerce building, Buffalo, has warehouses at Depew, near Buffalo. Julius Hofeller is president; Leo Loeser, vice-president; and Isadore Loeser, secretary and treasurer of the new firm.

Firestone Tire and Rubber Co., Akron, Ohio, have removed their New York quarters into No. 1871-75 Broadway, the three upper floors and basement of which they will use for storage and shop equipment, special attention being paid to side-wire motor truck tires and rims. On the store floor, they will have facilities for housing a large number of vehicles, while their tires are receiving attention. The new branch, with its facilities and increased accommodations, is in keeping with the steady growth in the company's business since their branch, one of the oldest in the city, was established in 1900. Dan C. Swander is in charge.

The Republic Rubber Co., Youngstown, Ohio, have established a new branch at 126 West Sixth street, St. Paul, Minn.

A firm of importers in the Levant informs an American consulate of a list of goods in which it is interested to the extent of being desirous of entering into business relations with firms exporting them from the United States. Rubber shoes for men, women and children are included in the list. On addressing the Bureau of Manufactures, Department of Commerce and Labor, Washington, District of Columbia, and quoting the file number 6549 particulars may be obtained.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks ending April 22:

COMMON STOCK, $25,000,000.
[The treasury of a subsidiary company holds $1,334,000.]
Last Dividend, April 30, 1900—1%.

Week April 1	Sales	6,700 shares	High	43¾	Low	41¾
Week April 8	Sales	17,640 shares	High	43⅞	Low	40½
Week April 15	Sales	1,850 shares	High	41¾	Low	40¾
Week April 22	Sales	5,800 shares	High	41¼	Low	38

For the year—High, 47⅞, March 1; Low, 36, January 6.
Last year—High, 52½; Low, 27.

FIRST PREFERRED STOCK, $39,824,400.
Last Dividend, January 31, 1911—2%.

Week April 1	Sales	300 shares	High	114	Low	113
Week April 8	Sales	735 shares	High	114¼	Low	113
Week April 15	Sales	600 shares	High	114⅞	Low	112¾
Week April 22	Sales	500 shares	High	112½	Low	111¾

For the year—High, 114⅞, April 10; Low, 109½, January 18.
Last year—High, 116½; Low, 99.

SECOND PREFERRED STOCK, $9,965,000.
Last Dividend, January 31, 1911—1½%.

Week April 1	Sales	1,050 shares	High	77½	Low	77
Week April 8	Sales	100 shares	High	77½	Low	77½
Week April 15	Sales	—— shares	High	——	Low	——
Week April 22	Sales	100 shares	High	76⅝	Low	76⅝

For the year—High, 79, March 1; Low, 72½, January 31.
Last year—High, 84; Low, 59½.

SIX PER CENT. TRUST GOLD BONDS, $19,000,000.
Outstanding of the 1908 issue of $20,000,000.

Week April 1	Sales	42 bonds	High	103¾	Low	103⅝
Week April 8	Sales	135 bonds	High	103⅝	Low	103½
Week April 15	Sales	28 bonds	High	103½	Low	103⅜
Week April 22	Sales	83 bonds	High	104	Low	103⅞

For the year—High, 104, February 11; Low, 103, January 7.
Last year—High, 104½; Low, 101¾.

FINAL DECREE IN THE SELDEN SUIT.

A FINAL decree was entered recently in the United States Circuit Court in the Selden automobile patent case. It will be remembered that the Circuit Court of Appeals a short time ago reversed a decision of the lower court to the effect that half a dozen companies were infringing the Selden patent. The final decree, following this decision of the Circuit Court of Appeals, taxes against the plaintiffs, the Columbia Motor Car Company and George B. Selden, the costs in the suit, amounting to $31,880.42.

TRADE NEWS NOTES.

WELLING S. KATZENBACH, of Katzenbach & Bullock Co., Trenton, N. J., importers and dealers in chemicals, is visiting the rubber trade in the Middle West.

The New York office of Meyer Cohn, dealer in rubber waste, of Hanover, Germany, has been removed from 117 Chambers street to the Irving Building, No. 2 Hudson street. A chemical department for rubber manufacturers, in charge of Mr. Emil Sichel, has been added by the firm, the scrap rubber department being as before, in charge of Mr. Chas Baron.

A. W. Brunn, New York, announces that, having acquired all the capital stock of the Rubber Import Co., New York, he will continue the business under his own name, bestowing special attention on the importation of crude rubber, gutta percha, gutta jelutong (pontianac) and balata, waste rubber and rubber substitutes which he will sell, either on a c. i. f. basis or on landed terms. His offices will remain in the Produce Exchange Building, New York.

Woven Steel Hose and Rubber Co., Trenton, N. J., have appointed the National Sales Corporation, 248-250 West street, New York, with offices at Chicago, Ill., and Detroit, Mich., factory sales manager for the Autobestine Brake Lining, for automobile brakes.

Walpole Rubber Co., Walpole, Massachusetts, announce that Mr. E. C. Green has rejoined the staff of that corporation in the capacity of general purchasing agent of the consolidated companies, with headquarters at the factory office in Walpole.

PARAHIDE RUBBER GOODS.

A SECRET compound of rubber and shredded sole leather is the basis of the organization of the Parahide Rubber Co., Boston, incorporated under the laws of the State of Massachusetts, with a capital of $2,000,000, and a $25,000 plant in Salem, Mass., for the manufacture of "Parahide" goods. These include, in addition to rubber soles and heels, which they have already placed on the market, automobile tires, carriage tires, step-pads, mats, etc., in infinite variety. It is claimed that the compound, while possessing extraordinary durability, has all the resiliency of ordinary rubber goods, together with remarkable non-slip properties, that it is an ideal material for shoe soles of all kinds, being not only waterproof, non-absorptive and non-slipping, but free from the tendency to "draw" the feet. Parahide tires have been tested up to a mileage of 5,000 miles, without suffering a puncture, while they are said to reduce the danger of slipping or skidding to a minimum, owing to the fact that the material does not wear smooth and slippery, the fact that tires made from Parahide are reduced one-half in cost, being also an important point in their favor. The company owns and controls all the patents, formulæ, etc., for the United States, England and her colonies, and France.

MR. REEVE GOES TO EUROPE.

ARTHUR REEVE, of the United States Rubber Co., sailed for Europe, April 27, on the Hamburg-American steamer *Cleveland*, to be gone five or six weeks on some special business for his company. Mr. Reeve has had twenty-five years' experience, starting in the Woonsocket factory under the late Joseph Banigan, where he received excellent training both in mill work and office work, so that he knows both the making and selling of rubber footwear very thoroughly.

TRADE NEWS NOTES.

ONE of the enjoyable banquets given the officers and employees of the Goodyear Fire and Rubber Co., from time to time, was recently held at the Barberton Inn, Barberton, Ohio. Responses to toasts were made by P. W. Litchfield, superintendent of the factory; W. D. Shilts, auto tire sales manager, and others; C. W. Seiberling acting as toastmaster. A thoroughly good time was enjoyed by all present.

The Firestone Fire and Rubber Co., Akron, Ohio, have opened a new direct factory branch in Atlanta, Ga., at 58 Auburn avenue. Wylie F. West, who has been transferred from the St. Louis branch, is in charge.

A customer at York, Pa., writes the Goodyear Tire and Rubber Company at Akron, to the effect that he has on his Reo car one of the Goodyear quick detachable tires, now worn down to the fabric but still in service, which has been in constant use ever since the car was purchased, five years ago. It has outworn two sets of tires of other makes.

The Featheredge Rubber Co. has succeeded the "N" Tire Rubber Sponge Co. and will carry on the former company's business at 408-416 W. Indiana street, Chicago, Ill. No change will be made in the personnel of the company.

A special ignition wire for aeroplanes and all types of flying machines is being made by the recently incorporated Standard Rubber and Cable Co., Bridgeport, Connecticut. They have brought it out under the title of Standard Aero-cable, and as a high-class article, designed particularly for the purpose intended, it is a new departure in this line.

In Denver, Colorado, the W. C. Hendrie Rubber Co. will establish a plant for the manufacture of rubber pump valves and moulded rubber goods. It will be the only establishment of the kind between Chicago and the Pacific Coast, and will be a distributing station for this section.

SEND for Index (free) to Mr. Pearson's "Crude Rubber and Compounding Ingredients."

Review of the Crude Rubber Market.

THE market opened with unusual vigor, but has for the greater part of last month fluctuated considerably with a pronounced tendency toward recession at its close. The general disposition on the part of rubber manufacturers is and has been to confine their purchases to the minimum of necessity—a significant indication of the weakness chacterizing the latter part of the month on upriver fine is the decline from $1.50 to $1.12. In the opinion of many in close touch with the market, a revival of the prices of 1910 did not seem unlikely, which in itself has been an unsettling factor militating against extensive operation on the part of buyers.

It is hoped by operators that the recent weakness will be followed by a favorable reaction and that a natural, healthy demand by the more important buyers will soon create an upward tendency.

NEW YORK QUOTATIONS.

FOLLOWING are the quotations at New York for Pará grades, one year ago, one month ago, and April 29—the current date:

PARA.	May 1, '10.	April 1, '11.	April 29, '11.
Islands, fine, new	275@277	130@131	118@120
Islands, fine, old	none here	none here	120@121
Upriver, fine, new	281@282	139@140	126@127
Upriver, fine, old	none here	144@145	130@131
Islands, coarse, new	109@110	62@ 63	61@ 62
Islands, coarse, old	none here	none here	none here
Upriver, coarse, new	182@185	108@109	89@ 90
Upriver, coarse, old	none here	110@111	92@ 93
Cametá	126@127	79@ 80	75@ 76
Caucho (Peruvian), ball	180@182	108@109	94@ 95
Caucho (Peruvian), sheet	none here	none here	none here
PLANTATION PARA.			
Fine smoked sheet	285@288	159@160	140@141
Fine pale crepe	...@...	145@146	140@141
Fine sheets and biscuits	...@...	142@143	130@131
CENTRALS.			
Esmeralda, sausage	170@172	105@106	88@ 89
Guayaquil, strip	130@135	none here	none here
Nicaragua, scrap	167@168	103@104	87@ 88
Panama	none here	none here	none here
Mexican, scrap	170@172	103@104	86@ 87
Mexican, slab	none here	62@ 63	none here
Mangabeira, sheet	none here	68@ 69	none here
Guayule	110@110	64@ 65	58@ 59
Balata, sheet	...@...	93@...	83@ 84
Balata, block	...@...	67@ 68	56@ 57
AFRICAN.			
Lopori, ball, prime	none here	123@124	115@118
Lopori, strip, prime	none here	none here	none here
Aruwimi	none here	122@123	112@113
Upper Congo, ball, red	190@191	125@126	109@110
Ikelemba	none here	none here	none here
Sierra Leone, 1st quality	188@190	122@123	100@102
Massai, red	188@190	122@123	100@102
Soudan niggers	none here	none here	none here
Cameroon, ball	128@130	79@ 80	76@ 77
Benguela	none here	79@ 80	70@ 71
Madagascar, pinky	125@126	100@101	87@ 88
Accra flake	40@ 42	40@ 41	38@ 39
EAST INDIAN.			
Assam	none here	104@105	none here
Pontianak	9¾@10¾	7@7¼	6¼@6½
Borneo	none here	none here	none here

Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine	5$500	Upriver, fine	6$000
Islands, coarse	none	Upriver, coarse	3$500
		Exchange	16¼*d.*

Latest Manáos advices:

Upriver, fine	6$200	Exchange	16¼*d.*
Upriver, coarse	3$700		

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.

	Fine and Medium.	Coarse.	Total 1911.	Total 1910.	Total 1909.
Stocks, February 28....*tons*	134	31 =	165	186	385
Arrivals, March	652	402 =	1,054	3,211	2,068
Aggregating	786	433 =	1,219	3,397	2,453
Deliveries, March	468	355 =	823	3,117	2,002
Stocks, March 31	318	78 =	396	280	451

	PARA.			ENGLAND.		
	1911.	1910.	1909.	1911.	1910.	1909.
Stocks, February 28, *tons*	3,245	465	1,710	1,385	510	420
Arrivals, March	2,955	3,890	2,980	1,594	632	1,912
Aggregating	6,200	4,355	4,690	2,979	1,142	2,332
Deliveries, March	2,570	3,520	3,129	1,114	602	2,002
Stocks, March 31	3,630	835	1,561	1,865	540	330

	1911.	1910.	1909.
World's visible supply, March 31.....*tons*	7,144	3,737	4,264
Pará receipts, July 1 to March 31	24,670	26,895	25,320
Pará receipts of caucho, same dates	4,720	5,215	5,290
Afloat from Pará to United States, Mar. 31	183	117	405
Afloat from Pará to Europe, March 31	1,070	1,965	1,310

Amsterdam.

F. JOOSTEN reports [April 18]:

Our next tender sale will take place on May 3, and will include about 14,200 kilos, of which about 3,980 kilos is *Hevea*, 8,500 kilos *Ficus*, 800 kilos *Castilloa* and 920 kilos Sumatra. Since our last sale only a moderate business took place, some old parcels of *Hevea* sheets and Sumatra *Ficus* being disposed of as well as some new arrivals of rooty Madagascar.

Rubber Scrap Prices.

LATE NEW YORK quotations—prices paid by consumers for carload lots, per pounds—are practically unchanged as follows:

	April 1.	May 1.
Old rubber boots and shoes—domestic	9½@ 9⅝	9½@ 9⅝
Old rubber boots and shoe—foreign	8¾@ 9	9 @ 9⅛
Pneumatic bicycle tires	4½@ 4¾	4½@ 4¾
Automobile tires	8⅜@ 8½	8½@ 8⅝
Solid rubber wagon and carriage tires	8½@ 9	8½@ 9
White trimmed rubber	11 @11½	11 @11½
Heavy black rubber	4¾@ 5¼	4¾@ 5¼
Air brake hose	4¾@ 5	4¾@ 5
Garden hose	2 @ 2¼	2 @ 2¼
Fire and large hose	2½@ 2¾	2½@ 2¾
Matting	1 @ 1⅛	1 @ 1⅛

Antwerp.

RUBBER STATISTICS FOR MARCH.

DETAILS.	1911.	1910.	1909.	1908.	1907.
Stocks, February 28...*kilos*	539,207	516,534	331,433	907,104	603,861
Arrivals in March.....	483,396	263,188	544,126	692,398	416,734
Congo sorts	365,463	174,167	410,838	587,972	358,496
Other sorts	117,933	89,021	133,288	104,426	58,238
Aggregating 1,022,603	779,722	875,559	1,599,502	1,020,595	
Sales in March.....	376,989	280,620	279,704	462,610	295,057
Stocks, March 31.....	645,614	499,102	595,855	1,136,892	725,538
Arrivals since January 1..1,269,668	1,039,679	1,128,092	1,517,809	1,332,758	
Congo sorts	940,962	830,830	781,387	1,347,423	1,151,165
Other sorts	328,706	208,849	346,705	170,386	181,593
Sales since January 1.....1,212,266	1,082,089	1,127,972	1,387,811	1,265,404	

RUBBER ARRIVALS FROM THE CONGO.

MARCH 31.—By the steamer *Elisabethville:*

Bunge & Co. .....(Société Générale Africaine) *kilos*	69,300	
Do .....(Comptoir Commercial Congolais)	28,500	
Do .....(Chemins de fer Grands Lacs)	2,300	
Do .....(Cie. du Kasai)	100,400	
L. & W. Van de Velde (Société Comm. and Financ. Africaine)	2,500	
Do	5,300	
Willaert freres	1,500	
M. S. Cols	750	
Cassart & Henrion	500	
Edmond & Van Steensel	1,250	212,300

New York.

IN regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York), advises as follows: "During April there has been a good demand for commercial paper, both by city banks and out of town, the best rubber names ruling at 4 @ 4½ per cent., and those not so well known 5 @ 5½ per cent.

NEW YORK PRICES FOR MARCH (NEW RUBBER).

	1911.	1910.	1909.
Upriver, fine	$1.45@1.66	$2.09@2.58	$1.22@1.26
Upriver, coarse	1.08@1.18	1.30@1.70	.93@ .97
Islands, fine	1.30@1.56	2.03@2.45	1.18@1.21
Islands, coarse	.62@ .90	.90@1.07	.55@ .61
Cametá	.79@ .92	.95@1.28	.63@ .67

African Rubbers.

NEW YORK STOCKS (IN TONS).

March 1, 1910.....	161	October 1, 1910.....	375
April 1	121	November 1	100
May 1	125	December 1	140
June 1	90	January 1, 1911.....	115
July 1	120	February 1	115
August 1 250		March 1	111
September 1	300	April 1	98

Rubber Receipts at Manaos.

DURING February and eight months of the crop season, for three years (courtesy of Messrs. Scholz & Co.):

	FEBRUARY.			JULY-FEBRUARY.		
FROM—	1911.	1910.	1909.	1910-11.	1909-10.	1908-09
Rio Purús-Acre....*tons*	2,151	1,419	1,535	7,844	7,489	7,333
Rio Madeira	511	276	330	2,472	2,608	2,485
Rio Juruá	570	755	511	2,688	3,132	3,108
Rio Javary-Iquitos ...	289	288	342	1,939	2,469	2,156
Rio Solimoes	82	85	106	1,016	973	868
Rio Negro	132	114	119	241	549	390
Total	3,735	2,937	2,943	16,200	17,220	16,340
Caucho	649	719	1,015	2,908	3,959	4,072
Total	4,384	3,656	3,958	19,108	21,179	20,412
	For Shipment From.					
Manáos	2,321	2,412	2,660	13,088	15,809	15,102
Pará	2,063	1,240	1,298	6,020	5,370	5,310
Total	4,384	3,656	3,958	19,108	21,179	20,412

Para.

R. O. AHLERS & Co. report [April 6]:

The market oscillated slightly in accordance with reports from consuming centers. There are different rumors current about a *convenio* between the states of Amazonas and Pará concerning valorization, that a bank may be founded for that purpose with a capital of £6,000,000 [=$29,199,000]; that a loan of £4,000,000 [=$19,466,000] will be negotiated in London; and finally that the Banco do Brazil or the federal government may take over the 3,000 tons of the syndicate, keeping them out of the market and going on buying rubber. Which of these rumors deserves any credit remains to be seen.

Plantation Rubber From the Far East.

EXPORTS OF CEYLON GROWN RUBBER.

[From January 1 to March 13, 1910 and 1911. Compiled by the Ceylon Chamber of Commerce.]

	1910.	1911.
To Great Britain.....*pounds*	261,430	617,600
To United States.....	227,570	366,743
To Belgium	1,598	67,398
To Japan	.....	11,953
To Canada	1,911	9,971
To Australia	.....	7,967
To Germany	6,683	6,282
To Holland	.....	100
To India	.....	40
To Italy	452	.....
Total	499,644	1,088,054

[Same period 1909—216,153 pounds; same 1908—139,048.]

TOTAL EXPORTS FROM MALAYA.

[From January 1 to dates named. Reported by Barlow & Co., Singapore. These figures include the production of the Federated Malay States, but not of Ceylon.]

FROM—	1909.	1910.	1911.
Singapore (to March 2)....*pounds*	519,576	581,467	1,141,574
Penang (Feb. 19).....	496,971	330,267	467,040
Port Swettenham (Feb. 17).....	.....	1,022,562	1,995,674
Total	1,016,547	1,934,296	3,604,288

Liverpool.

WILLIAM WRIGHT & Co. report [April 1]:

Fine Pará.—The market has been subject to violent speculative manipulation, mainly, we think, intended to break the syndicate in Brazil. Latest information, however, is to the effect that the federal government in Brazil has come to the aid of the syndicate and presumably other receivers. The crop is said to be 10 per cent. short. We think America would buy if they could get a good line offered, and there is a considerable short interest in the market, so that at present everything points to a further advance, and it looks like being a pretty sharp one. Closing value.—Upriver *6s. 2d.* [= $1.50].

IMPORTS FROM PARA AT NEW YORK.

The Figures Indicate Weight in Pounds.

MARCH 27.—By the steamer *Cearense*, from Manáos and Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co.	52,700	3,200	.....	.....=	55,900
Poel & Arnold	6,400	25,400	19,800	.....=	51,600
A. T. Morse & Co.....	7,800	2,500	19,800	700=	30,800
Henderson & Korn	900	300	8,600	200=	10,000
L. Johnson & Co.	6,000	.....	.....	.....=	6,000
Total	73,800	31,400	48,200	900=	154,300

APRIL 11.—By the steamer *Minas Gereas*, from Pará:

A. T. Morse & Co.....	56,400	.....	48,200	13,900=	117,500
Poel & Arnold	5,000	700	32,300	.....=	38,000
Total	61,400	700	80,500	13,900=	155,500

APRIL 16.—By the steamer *Boniface*, from Manáos and Pará:

Poel & Arnold	10,700	13,200	86,500	9,400=	119,800
A. T. Morse & Co.	15,000	1,400	3,300	52,200=	71,900
Henderson & Korn	18,500	1,300	27,700	1,800=	49,300
H. A. Astlett	14,700	700	4,600	.....=	20,000
De Lagotellerie & Co.	.....	.....	21,100	.....=	21,100
Hagemeyer & Brunn	4,600	.....	2,700	.....=	7,300
Total	63,500	16,600	145,900	63,400	289,400

APRIL 22.—By the steamer *Dominic*, from Manáos and Parà:

Poel & Arnold	43,500	2,300	104,000	80,000=	229,800
New York Commercial Co...	76,400	20,400	32,300	20,700=	149,800
A. T. Morse & Co.	.....	.....	11,400	66,200=	77,600
Henderson & Korn	16,100	4,200	25,500	.....=	45,800
De Lagotellerie & Co.	.....	.....	39,600	.....=	39,600
Hagemeyer & Brunn	.....	.....	21,100	.....=	21,100
Total 136,000		26,900	233,900	166,900=	563,700

APRIL 24.—By the steamer *Clement*, from Manáos and Parà:

August Belmont & Co. 210,200		88,100	70,200	10,700=	379,200
Poel & Arnold	68,800	.....	70,600	25,100=	164,500
A. T. Morse & Co.	58,500	8,300	4,600	69,900=	141,300
New York Commercial Co..	3,300	300	2,700	24,400=	30,700
Laurence Johnson & Co. ..	31,800	.....	1,900	.....=	33,700
Total 372,600		96,700	150,000	130,100=	749,400

RUBBER FLUX

No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it DOES NOT BLOW UNDER CURE.

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LARGEST DEALERS IN OLD RUBBER IN THE WORLD.

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206-226 SCOTT ST. BUFFALO, N. Y.

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Manufacturers of moulded work will find that matting, valves, heels and springs retain their elasticity longer (resist oxidation), and the goods themselves will have a more "rubbery feel," where "Amax" is used. Its purity and uniformity insure a reduction in seconds and permits a larger percentage to be used. Made "Medium" and "Hard," to suit all compounds.

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97 WATER STREET . NEW YORK

PARA RUBBER VIA EUROPE.

	Pounds.	
MARCH 27.—By the *Campania*=Liverpool:		
Robinson & Co. (Fine)	15,000	
MARCH 28.—By the *Amerika*=Hamburg:		
James T. Johnstone (Fine)	9,000	
MARCH 30.—By the *Canadian*=Liverpool:		
Raw Products Co (Fine)	2,000	
N. Y. Commercial Co (Caucho)	4,500	6,500
MARCH 30.—By the *Ucayali*=Iquitos:		
H. A. Astlett (Fine)	5,000	
H. A. Astlett (Coarse)	3,500	
H. A. Astlett (Caucho)	6,000	
W. R. Grace & Co. (Fine)	3,500	
F. Rosenstern & Co. (Fine)	2,500	20,500
APRIL 3.—By the *Baltic*=Liverpool:		
Robinson & Co. (Fine)	13,500	
Poel & Arnold (Caucho)	22,500	36,000
APRIL 3.—By the *Minnetonka*=London:		
General Rubber Co. (Coarse)		33,000
APRIL 10.—By the *Caronia*=Liverpool:		
Poel & Arnold (Caucho)		22,500
APRIL 17.—By the *Laurentic*=Liverpool:		
N. Y. Commercial Co. (Fine)	11,000	
Henry A. Gould Co. (Fine)	8,000	
Wallace L. Gough Co. (Fine)	7,000	
Raw Products Co. (Coarse)	7,000	
Henderson & Korn (Caucho)	11,000	44,000
APRIL 19.—By the *Carmania*=Liverpool:		
Robinson & Co. (Fine)		8,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

	Pounds.	
MARCH 27.—By the *Colon*=Colon:		
G. Amsinck & Co.	17,000	
New York Commercial Co.	3,500	
Laurence Johnson & Co.	2,500	
Mecke & Co.	1,500	
Jose Julia & Co.	1,500	24,000
MARCH 27.—By the *Comus*=New Orleans:		
Manhattan Rubber Manufacturing Co.	4,500	
A. T. Morse & Co.	1,500	
G. Amsinck & Co.	1,500	7,500
MARCH 28.—By *El Sol*=Galveston:		
Continental-Mexican Rubber Co.	*155,000	
Charles T. Wilson	*27,000	
For Canada	*10,000	*192,000
MARCH 30.—By the *Amerika*=Hamburg:		
Raw Products Co.		*9,000
MARCH 28.—By the *Oruba*=Colon:		
G. Amsinck & Co.	7,000	
W. R. Grace & Co.	7,000	
Isaac Brandon & Bros.	5,500	
J. Sambrada & Co.	1,500	21,000
MARCH 28.—By the *Prinz Eitel Friedrich*=Columbia:		
Kunhardt & Co.	8,000	
Maitland, Coppell & Co.	2,500	
Pablo Calvet & Co.	2,500	
A. Held	2,500	
For London	3,500	19,000
MARCH 30.—By the *Bayamo*=Tampico:		
Ed. Maurer	*155,000	
New York Commercial Co.	85,000	
Poel & Arnold	65,000	
For Europe	50,000	355,000
MARCH 31.—By the *Mexico*=Frontera:		
E. Nelson Tibbals & Co.	13,000	
Harburger & Stack	9,000	
Mexican Products Co.	6,000	
W. L. Wadleigh	5,000	
General Export Co.	5,500	
A. T. Morse & Co.	2,000	
E. Steiger & Co.	2,000	
H. Marquardt & Co.	2,000	
Isaac Kubie Co.	1,500	46,000
APRIL 1.—By the *Romney*=Bahia:		
J. H. Rossbach & Bros.		50,000
APRIL 3.—By the *Seguranca*=Tampico:		
Ed. Maurer	*115,000	
New York Commercial Co.	*69,000	*184,000
APRIL 3.—By the *Advance*=Colon:		
G. Amsinck & Co.	12,000	
American Trading Co.	3,500	
Mecke & Co.	1,500	
Jose Julia & Co.	1,000	18,000
APRIL 3.—By the *Baltic*=Liverpool:		
Rubber Import Co.		15,000
APRIL 3.—By the *Momus*=New Orleans:		
A. T. Morse & Co.	6,000	
Eggers & Heinlein	1,000	
New York Commercial Co.	1,000	8,000
APRIL 4.—By *El Mundo*=Galveston:		
Continental-Mexican Rubber Co.	*75,000	
Charles T. Wilson	*9,000	*84,000
APRIL 5.—By the *Kaiserin Auguste Victoria*=Colon:		
G. Amsinck & Co.	6,000	
A. Rosenthal & Sons	4,500	
Pablo Calvet & Co.	3,000	
Mecke & Co.	2,000	
Wessels Kulenkampff & Co.	1,000	
Isaac Brandon & Bros.	1,000	
Gillespie Bros. & Co.	1,000	
A. M. Capen's Sons	1,000	19,500
APRIL 5.—By the *Pretoria*=Hamburg:		
James T. Johnstone		*11,000
APRIL 6.—By the *Panama*=Colon:		
George A. Alden & Co.	3,000	
Piza, Nephews & Co.	2,000	5,000
APRIL 7.—By the *Antilles*=New Orleans:		
Eggers & Heinlein	2,500	
Manhattan Rubber Manufacturing Co.	2,000	
New York Commercial Co.	1,000	5,500
APRIL 7.—By *El Alba*=Galveston:		
Continental-Mexican Rubber Co.	*35,000	
Charles T. Wilson	*15,000	*50,000
APRIL 8.—By the *Morro Castle*=Frontera:		
Harburger & Stack	5,000	
E. Nelson Tibbals & Co.	2,500	
International Products Co.	1,500	
J. W. Wilson & Co.	1,000	
For Europe	6,000	16,000
APRIL 8.—By the *Hawaiian*=Mexico:		
American Trading Co.		20,000
APRIL 10.—By the *Caronia*=Liverpool:		
Rubber Import Co.		22,500
APRIL 10.—By *El Oriente*=Galveston:		
Continental-Mexican Rubber Co.		*80,000
APRIL 10.—By the *Matanzas*=Tampico:		
Ed. Maurer	*175,000	
New York Commercial Co.	*110,000	*285,000
APRIL 12.—By *El Cid*=Galveston:		
Continental-Mexican Rubber Co.	*45,000	
Charles T. Wilson	*10,000	*55,000
APRIL 12.—By the *Comus*=New Orleans:		
A. T. Morse & Co.	3,500	
Eggers & Heinlein	3,000	
A. N. Rotholz	2,500	9,000
APRIL 12.—By the *Prinz Sigismund*=Columbia:		
Kunhardt & Co.	10,000	
Caballero & Blanco	10,000	
A. Held	6,500	
Maitland, Coppell & Co.	4,500	
De Sola Bros. & Pardo	5,500	
Pablo Calvet & Co.	2,000	
C. Amsinck & Co.	2,000	
Heilbron Wolff & Co.	1,000	41,500
APRIL 12.—By the *Magdalena*=Colon:		
G. Amsinck & Co.	12,000	
Jose Julia & Co.	6,500	
Isaac Brandon & Bros.	7,000	
Roldau & Van Sickle	4,500	
General Rubber Co.	4,000	
A. M. Capen's Sons	3,500	
Mecke & Co.	2,500	
Dumarest Bros. & Co.	2,000	
A. T. Morse & Co.	1,500	
Gillespie Bros. & Co.	1,000	
B. Williamson Co.	1,000	45,500
APRIL 15.—By *El Rio*=Galveston:		
Continental-Mexican Rubber Co.		*110,000
APRIL 15.—By the *Merida*=Frontera:		
H. Marquardt & Co.	6,500	
E. Steiger & Co.	5,000	
Harburger & Stack	3,500	
W. Peterson Co.	1,500	
A. Klipstein & Co.	1,500	
International Products Co.	1,500	
Mecke & Co.	1,000	
Herman & Klugge	1,000	21,500
APRIL 17.—By the *Ancon*=Colon:		
New York Commercial Co.	5,500	
G. Amsinck & Co.	3,500	
Laurence Johnson & Co.	2,500	11,500
APRIL 17.—By the *Vigilancia*=Tampico:		
New York Commercial Co.	*100,000	
Ed. Maurer	*155,000	
Poel & Arnold	*30,000	
For Europe	*80,000	*365,000
APRIL 17.—By the *President Grant*=Hamburg:		
A. T. Morse & Co.		*18,000
APRIL 18.—By the *Calderon*=Bahia:		
Adolph Hirsch & Co.		9,000
APRIL 18.—By *El Sol*=Galveston:		
Continental-Mexican Rubber Co.		*90,000
APRIL 19.—By the *Prinz Joachim*=Colon:		
Isaac Brandon & Bros.	2,500	
Graham, Hinkley & Co.	1,500	
Suzarte & Whitney	1,500	
A. Rosenthal & Sons	1,000	
Gillespie Bros. & Co.	1,000	7,500
APRIL 21.—By *El Valle*=Galveston:		
Continental-Mexican Rubber Co.		*80,000
APRIL 22.—By the *Asiatic*=Bahia:		
J. H. Rossbach & Bros.		25,000
APRIL 22.—By the *Monterey*=Frontera:		
E. Nelson Tibbals Co.	9,000	
Laurence Import. Co.	8,500	
E. Steiger & Co.	4,500	
International Products Co.	3,000	
Harburger & Stack	2,000	
Herman & Klugge	1,500	
Ceneral Export and Commission Co.	1,500	
Mecke & Co.	1,500	
W. L. Wadleigh	1,000	32,500
MARCH 30.—By the *St. Paul*=London:		
A. T. Morse & Co.	30,000	
George A. Alden & Co.	25,000	55,000
APRIL 3.—By the *Baltic*=Liverpool:		
General Rubber Co.	56,000	
George A. Alden & Co.	35,000	
Robinson & Co.	13,500	
Raw Products Co.	4,500	
James T. Johnstone	6,500	
Poel & Arnold	22,500	138,000
APRIL 5.—By the *Finland*=Antwerp:		
George A. Alden & Co.	45,000	
Poel & Arnold	2,500	47,500
APRIL 5.—By the *Pretoria*=Hamburg:		
A. T. Morse & Co.	38,000	
James T. Johnstone	11,500	
George A. Alden & Co.	11,500	
Wallace L. Gough & Co.	11,000	
Levesey & Co.	7,000	
Rubber Trading Co.	6,500	85,500
APRIL 10.—By the *Carmania*=Liverpool:		
Poel & Arnold	70,000	
Henderson & Korn	11,500	81,500
APRIL 10.—By the *Kaiserin Auguste Victoria*=Hamburg:		
Poel & Arnold	22,500	
A. T. Morse & Co.	19,000	
George A. Alden & Co.	13,500	
James T. Johnstone	7,000	62,000
APRIL 10.—By the *Philadelphia*=London:		
A. T. Morse & Co.	11,000	
Poel & Arnold	13,500	24,500

AFRICAN.

	Pounds.	
MARCH 27.—By the *Campania*=Liverpool:		
George A. Alden & Co.		22,500
MARCH 27.—By the *Minneapolis*=London:		
George A. Alden & Co.		9,000
MARCH 28.—By the *Vaderland*=Antwerp:		
A. T. Morse & Co.	40,000	
Livesey & Co.	20,000	
Poel & Arnold	22,500	82,500
MARCH 28.—By the *Amerika*=Hamburg:		
Poel & Arnold	38,000	
A. T. Morse & Co.	25,000	
George A. Alden & Co.	19,000	
Livesey & Co.	21,000	
Raw Products Co.	3,500	106,500
MARCH 30.—By the *Canadian*=Liverpool:		
A. T. Morse & Co.	34,000	
Poel & Arnold	134,000	
George A. Alden & Co.	2,500	
James T. Johnstone	2,500	172,000
MARCH 30.—By the *Chicago*=Havre:		
Poel & Arnold		9,000
MARCH 30.—By the *St. Paul*=London:		
A. T. Morse & Co.	30,000	
George A. Alden & Co.	25,000	55,000
APRIL 3.—By the *Baltic*=Liverpool:		
General Rubber Co.	56,000	
George A. Alden & Co.	35,000	
Robinson & Co.	13,500	
Raw Products Co.	4,500	
James T. Johnstone	6,500	
Poel & Arnold	22,500	138,000
APRIL 5.—By the *Finland*=Antwerp:		
George A. Alden & Co.	45,000	
Poel & Arnold	2,500	47,500
APRIL 5.—By the *Pretoria*=Hamburg:		
A. T. Morse & Co.	*38,000	
James T. Johnstone	11,500	
George A. Alden & Co.	11,500	
Wallace L. Gough & Co.	11,000	
Levesey & Co.	7,000	
Rubber Trading Co.	6,500	85,500

APRIL 10.—By the *Carmania*=Liverpool:

Poel & Arnold	70,000	
Henderson & Korn	11,500	81,500

APRIL 10.—By the *Kaiserin Auguste Victoria*=Hamburg:

Poel & Arnold	22,500	
A. T. Morse & Co.	19,000	
George A. Alden & Co.	13,500	
James T. Johnstone	7,000	62,000

APRIL 10.—By the *Philadelphia*=London:

A. T. Morse & Co.	11,000	
Poel & Arnold	13,500	
Rubber Trading Co.	7,000	
James T. Johnstone	2,500	34,000

APRIL 10.—By the *Soperga*=Lisbon:

Poel & Arnold	67,000	
George A. Alden & Co.	45,000	112,000

APRIL 11.—By the *La Bretagne*=Havre:

A. T. Morse & Co.		7,000

APRIL 11.—By the *Kroonland*=Antwerp:

George A. Alden & Co.	210,000	
Poel & Arnold	30,000	
A. T. Morse & Co.	13,500	
Livesey & Co.	7,000	260,500

APRIL 13.—By the *Victorian*=Liverpool:

George A. Alden & Co.	22,500	
James T. Johnstone	22,500	45,000

APRIL 13.—By the *Adriatic*=London:

General Rubber Co.		25,000

APRIL 17.—By the *Laurentic*=Liverpool:

George A. Alden & Co.	22,500	
Henderson & Horn	22,500	
William H. Stiles	11,500	
Raw Products Co.	9,000	
Poel & Arnold	5,000	
Henry A. Gould Co.	2,500	73,000

APRIL 17.—By the *Lapland*=Antwerp:

Raw Products Co.	7,000	
Livesey & Co.	5,000	
Poel & Arnold	4,500	16,500

APRIL 17.—By the *President Grant*=Hamburg:

George A. Alden & Co.	11,500	
Livesey & Co.	11,000	
R. Badenhop	9,000	
Poel & Arnold	7,000	
Raw Products Co.	10,000	48,500

APRIL 19.—By the *Carmania*=Liverpool:

General Rubber Co.	56,000	
Robinson & Co.	34,000	
Poel & Arnold	11,500	
Livesey & Co.	2,500	104,000

EAST INDIAN.

[*Denotes plantation rubber.]

	POUNDS.	
MARCH 27.—By the *Campania*=Liverpool:		
William H. Stiles		*17,000
MARCH 27.—By the *Swazi* Colombo:		
New York Commercial Co.	*125,000	
A. T. Morse & Co.	*67,000	*192,000
MARCH 27.—By the *Minneapolis*=London:		
General Rubber Co.	*55,000	
New York Commercial Co.	*25,000	
James T. Johnstone	*10,000	
Robinson & Co.	*7,000	*97,000
MARCH 28.—By the *Vaderland*=Antwerp:		
R. Badenhop		*11,500
MARCH 30.—By the *St. Paul*=London:		
New York Commercial Co.	*60,000	
Poel & Arnold	*65,000	
Ed. Maurer	*25,000	
Robinson & Co.	*7,000	*157,000

APRIL 3.—By the *Baltic*=Liverpool:

William H. Stiles	*34,000	
Henderson & Korn	*15,000	*49,000

APRIL 3.—By the *Schwarzfels*=Colombo:

A. T. Morse & Co.	*55,000	
Poel & Arnold	*22,500	
New York Commercial Co.	*22,000	*99,500

APRIL 3.—By the *Minnetonka*=London:

New York Commercial Co.	*67,000	
Poel & Arnold	*33,000	
James T. Johnstone	*175,000	
Ed. Maurer	*115,000	
A. T. Morse & Co.	*11,000	
William H. Stiles	*7,000	
Robinson & Co.	*4,500	*412,500

APRIL 3.—By the *Yeddo*=Colombo:

New York Commercial Co.	*35,000	
A. T. Morse & Co.	*20,000	*55,000

APRIL 4.—By the *Indrasamha*=Singapore:

Haebler & Co.	11,500	
Poel & Arnold	11,500	
Wallace L. Gough Co.	10,000	33,000

APRIL 5.—By the *Finland*=Antwerp:

A. T. Morse & Co.	*35,000	
Poel & Arnold	*25,000	
New York Commercial Co.	*5,000	65,000

APRIL 6.—By the *Majestic*=London:

Poel & Arnold	*33,500	
New York Commercial Co.	*20,000	
George A. Alden & Co.	4,500	58,000

APRIL 10.—By the *Caronia*=Liverpool:

William H. Stiles		*15,000

APRIL 10.—By the *Philadelphia*=London:

Poel & Arnold	*15,000	
Ed. Maurer	*12,500	
New York Commercial Co.	*4,500	*32,000

APRIL 13.—By the *Adriatic*=London:

Poel & Arnold	*50,000	
A. T. Morse & Co.	*50,000	
New York Commercial Co.	*8,000	
Robinson & Co.	*3,500	
Earle Brothers	*2,000	*113,500

APRIL 17.—By the *Laurentic*=Liverpool:

William H. Stiles	*13,500	
New York Commercial Co.	*7,000	*20,500

APRIL 17.—By the *Lapland*=Antwerp:

A. T. Morse & Co.	*17,000	
New York Commercial Co.	*17,000	*34,000

APRIL 17.—By the *St. Louis*=London:

New York Commercial Co.	*79,000	
Poel & Arnold	*25,000	
Ed. Maurer	*9,000	*113,000

APRIL 17.—By the *President Grant*=Hamburg:

Poel & Arnold		*10,000

APRIL 18.—By the *Katuna*=Singapore:

Ed. Maurer	*35,500	
Wallace L. Gough	*20,000	
Haebler & Co.	25,000	
Wallace L. Gough	5,000	
Otto Isenstein & Co.	2,500	88,000

APRIL 19.—By the *Oceanic*=London:

New York Commercial Co.	*35,000	
Poel & Arnold	*60,000	95,000

APRIL 19.—By the *Carmania*=Liverpool:

William H. Stiles		*9,000

APRIL 20.—By the *Indradeo*=Singapore:

Ed. Maurer	*50,000	
Poel & Arnold	11,500	
Haebler & Co.	11,000	
Ed. Maurer	11,000	
Wallace L. Gough Co.	*9,000	92,500

GUTTA-JELUTONG.

	POUNDS.	
MARCH 30.—By the *Shimosa*=Singapore:		
L. Littlejohn & Co.	110,000	
Wallace L. Gough Co.	35,000	145,000
APRIL 4.—By the *Indrasamha*=Singapore:		
Wallace L. Gough Co.	45,000	
L. Littlejohn & Co.	55,000	100,000
APRIL 17.—By the *Katuna*=Singapore:		
Haebler & Co.	400,000	
L. Littlejohn & Co.	450,000	
Wallace L. Gough Co.	90,000	
George A. Alden & Co.	45,000	985,000
APRIL 20.—By the *Indradeo*=Singapore:		
Wallace L. Gough Co.	140,000	
L. Littlejohn & Co.	430,000	
Poel & Arnold	110,000	
Haebler & Co.	325,000	
George A. Alden & Co.	110,000	1,115,000

BALATA.

	POUNDS.	
MARCH 28.—By the *Marowijne*=Trinidad:		
G. Amsinck & Co.	11,000	
Middleton & Co.	2,000	13,000
APRIL 4.—By the *Coppename*=Trinidad:		
G. Amsinck & Co.		13,500
APRIL 6.—By the *Korona*=Demerara:		
American Trading Co.	3,000	
Bartling & DeLeon	3,000	6,000
APRIL 13.—By the *Grenada*=Trinidad:		
Iglesias Lobo & Co.	7,000	
American Trading Co.	4,000	
Ed. Maurer	2,500	13,500
APRIL 17.—By the *St. Louis*=London:		
Ed. Maurer		17,000
APRIL 18.—By the *Saramaca*=Trinidad:		
G. Amsinck & Co.	13,500	
Middleton & Co.	5,000	18,500

GUTTA-PERCHA.

MARCH 28.—By the *Amerika*=Hamburg:		
Robert Soltau & Co.		15,000
APRIL 4.—By the *Indrasamha*=Singapore:		
L. Littlejohn & Co.	75,000	
Haebler & Co.	20,000	95,000
APRIL 17.—By the *President Grant*=Hamburg:		
Robert Soltau & Co.		9,000
APRIL 20.—By the *Indradeo*=Singapore:		
L. Littlejohn & Co.	80,000	
Haebler & Co.	75,000	155,000

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—MARCH.

Imports:	Pounds.	Value.
India-rubber	7,198,431	$7,632,600
Balata	83,394	56,308
Gutta-percha	193,773	47,083
Gutta-jelutong (Pontianak)	1,389,702	58,882
Guayule	957,757	427,389
Total	9,823,057	$8,222,262
Exports:		
India-rubber	132,441	$108,248
Balata	8,357	5,599
Gutta-percha	.....	.....
Guayule	32,268	15,320
Reclaimed rubber	95,721	11,099
Rubber scrap, imported	599,531	$45,523
Rubber scrap, exported	334,841	43,540

PARA EXPORTS OF INDIA-RUBBER, FEBRUARY, 1911 (IN KILOGRAMS).

	NEW YORK.					EUROPE.					
EXPORTERS.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	TOTAL.
Gruner & Co.	54,294	14,128	100,656	16,632	185,710	93,753	12,256	31,769	72,457	210,235	395,945
E. Pinto Alves & Co.	42,730	3,680	137,202	2,165	185,777	109,199	19,397	32,441	39,441	200,478	386,255
Suarez Hermanos & Co., Ltd.	.....	.....	.....	.....	.....	187,013	2,514	6,072	7,080	202,679	202,679
Scholz, Hartje & Co.	13,430	1,700	10,890	660	26,680	60,198	5,528	37,186	22,440	125,352	152,032
Adelbert H. Alden, Ltd.	12,070	1,020	23,084	14,190	50,364	40,023	4,550	26,458	13,530	84,561	134,925
Mello & Co.	.....	.....	10,162	1,125	11,287	73,277	16,773	4,436	27,840	122,326	133,613
Gordon & Co.	.....	.....	.....	.....	.....	15,358	3,320	9,222	24,646	52,546	52,546
R. O. Ahlers & Co.	.....	.....	7,219	17,315	24,534	4,467	.....	.....	1,025	5,492	30,026
Pires Teixeira & Co.	7,820	.....	7,590	.....	15,410	11,050	.....	3,300	.....	14,350	29,760
J. Marques	.....	.....	.....	.....	.....	6,788	1,519	2,197	.....	10,504	10,504
A. de La Riviére & Co.	.....	.....	.....	.....	.....	5,780	.....	1,650	.....	7,430	7,430
Guilherme Aug. de Miranda Filho	960	640	.....	.....	1,600	.....	.....	.....	.....	.....	1,600
Sundries	.....	.....	.....	.....	.....	2,979	304	1,455	.....	4,738	4,738
Itacoatiara, direct	.....	.....	.....	.....	.....	4,620	1,017	3,440	800	9,877	9,877
Manáos, direct	330,819	90,426	157,432	61,834	640,511	741,780	122,658	124,953	288,288	1,277,679	1,918,190
Iquitos, direct	.....	.....	.....	.....	.....	121,519	11,697	45,602	111,048	289,866	289,866
Total, February, 1911	462,123	111,594	454,235	113,921	1,141,873	1,477,804	201,533	330,181	608,595	2,618,113	3,759,986
Total, January, 1911	728,494	157,522	563,542	245,226	1,694,784	884,454	117,265	123,838	287,438	1,413,025	3,107,809